

SOUTHERN TEXTILE BULLETIN

VOLUME 27

CHARLOTTE, N. C., THURSDAY, NOVEMBER 27, 1924

NUMBER 13

Cost Per Yard of Cloth

Is your chief concern as a manufacturer. Increased production per operative, made possible by more efficient machinery, is an effective means to lower costs per yard of cloth produced. But make sure the machinery you rely upon has proved more efficient in practice, not merely that according to someone's theory it should be more efficient.

The Savings of the Northrop Loom

Acknowledged and proved for years, have taken on a new meaning to many manufacturers since they have come to a fuller realization of the possibilities of **More Looms per Weaver**. They find there is no "if" about it. What their neighbors are doing they find they can do.

Don't Speculate on what some untried experiment or new-fangled contrivance will do. Get the full benefit of your Northrop Looms. **Let's Talk It Over.**

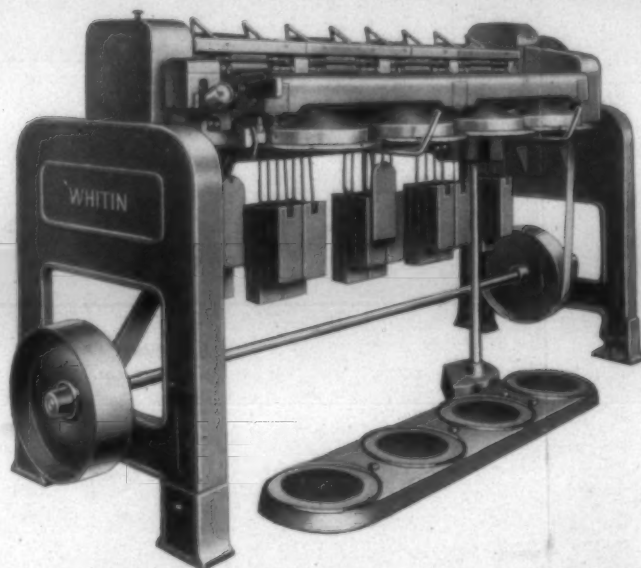
DRAPER CORPORATION

Southern Office Atlanta Georgia

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WHITIN MACHINE WORKS

ESTABLISHED 1831
TEXTILE MACHINERY



IMPROVED WHITIN

MODEL H

DRAWING FRAME

NEW WEIGHTING

NEW STOP MOTION

NEW GEARING

NARROWER WIDTH

EASY TO RUN AND ERECT

Ask for Particulars

MAIN OFFICE AND WORKS
WHITINSVILLE, MASS., U.S.A.
SOUTHERN OFFICE CHARLOTTE N.C.



Specify
"UCP" on your
Requisitions

These Products are the Reliable
Standards of Uniformity De-
manded by the Leading Textile
Mills

Dyestuffs Softeners

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Starch



**—and these Stars
have a meaning**

They signify the different grades in which Thin Boiling
Eagle Starch is offered to the textile industry.

Being the pioneers in the manufacture of Thin Boiling
Starches, we are gratified at the widespread recognition
they have received.

Be sure to select the grade best suited to your work. Our
knowledge and experience is at your service.

CORN PRODUCTS REFINING CO.

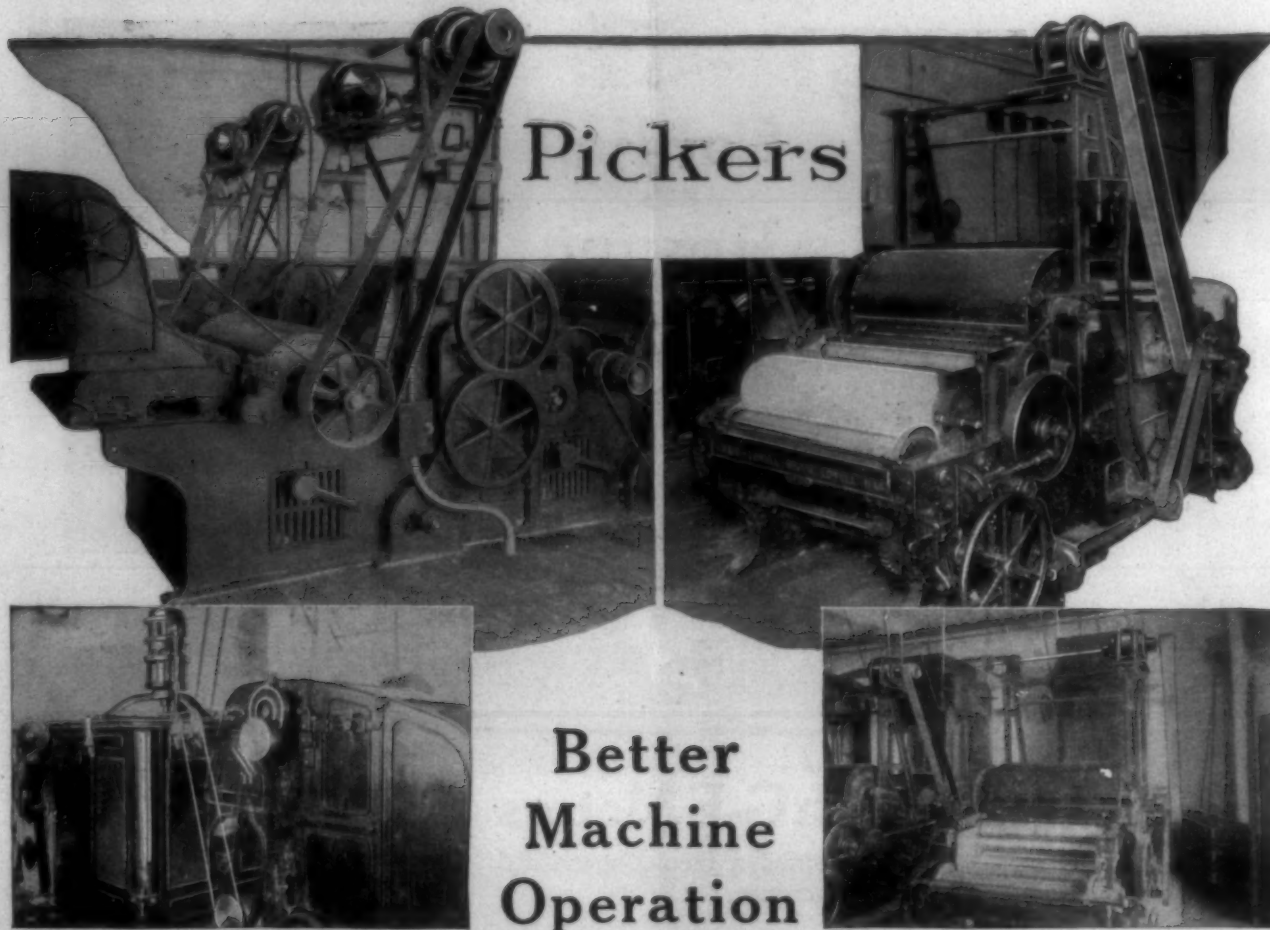
New York

Southern Office: Greenville, S. C.

Starch

Cotton

Use Individual Motor Drive



In the Picker Room individual motor drive produces economies by providing flexibility of operation, eliminating shafting load, and reducing the number of belts to a minimum.

G-E textile motors are specially designed for this service—are furnished with screened bearing heads; waste-packed, dust-tight bearings; and conduit terminal boxes. The insulation of the windings is moisture resisting, to avoid injury to motors from operation of sprinkler system in case of fire.

These motors are also designed for different methods of drive—with single shaft extension

and one pulley for single beater pickers; single shaft extension and two pulleys for 2-beater pickers; and double shaft extension with two pulleys and three bearings where the drive comes on opposite sides of the machine.

Vertical openers may be driven by direct-connected vertical motors when the machine speeds will permit.

G-E Picker Motors are available in sizes from 3-h.p. to 15-h.p., and have various speeds to suit the machinery speeds. Suitable G-E Controllers can also be furnished for any motor application.

General Electric Co.

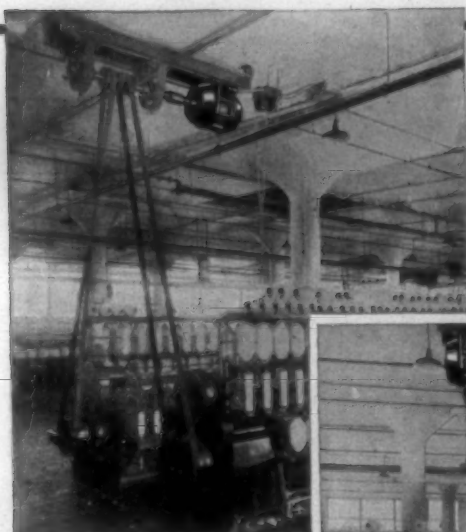


Schenectady, N. Y.

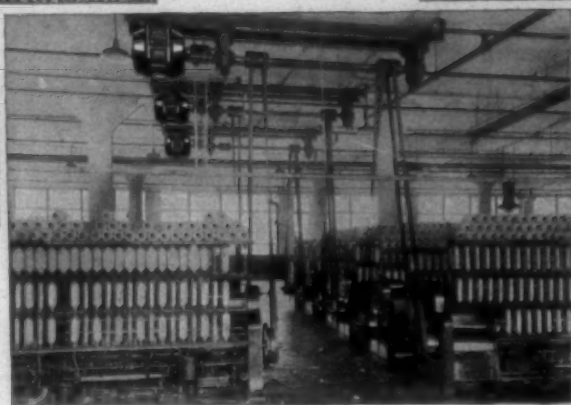
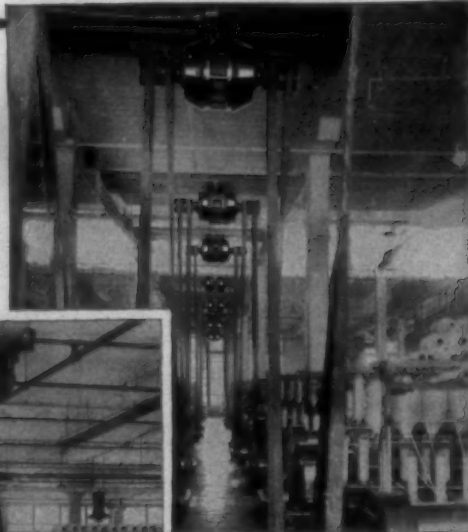
GENERAL ELECTRIC

Cotton

The Clean and Efficient Drive



**Carding
and
Roving**



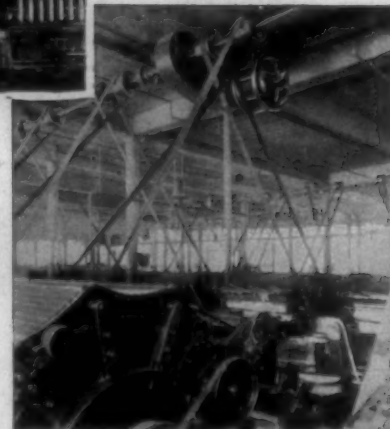
Best Results with G-E Motors

The use of G-E Motors provides a clean, successful way of driving Card Room machines.

All the machinery in the Card Room can utilize the light group drive method to advantage, but the tendency is more and more toward the individual drive where feasible, and where its advantages are apparent.

For individual drive, totally enclosed G-E Motors of the loom motor type, controlled by enclosed hand-operated switches giving time element thermal fuse protection, are recommended.

Slubbers, speeders and fine frames are usually driven in small groups, and good results are obtained by using either 2-frame or 4-frame drives, with G-E Motors of from 5-h.p. to 15-h.p. capacity.



G-E engineers will gladly co-operate with you in securing the most efficient motor drive for your machines.

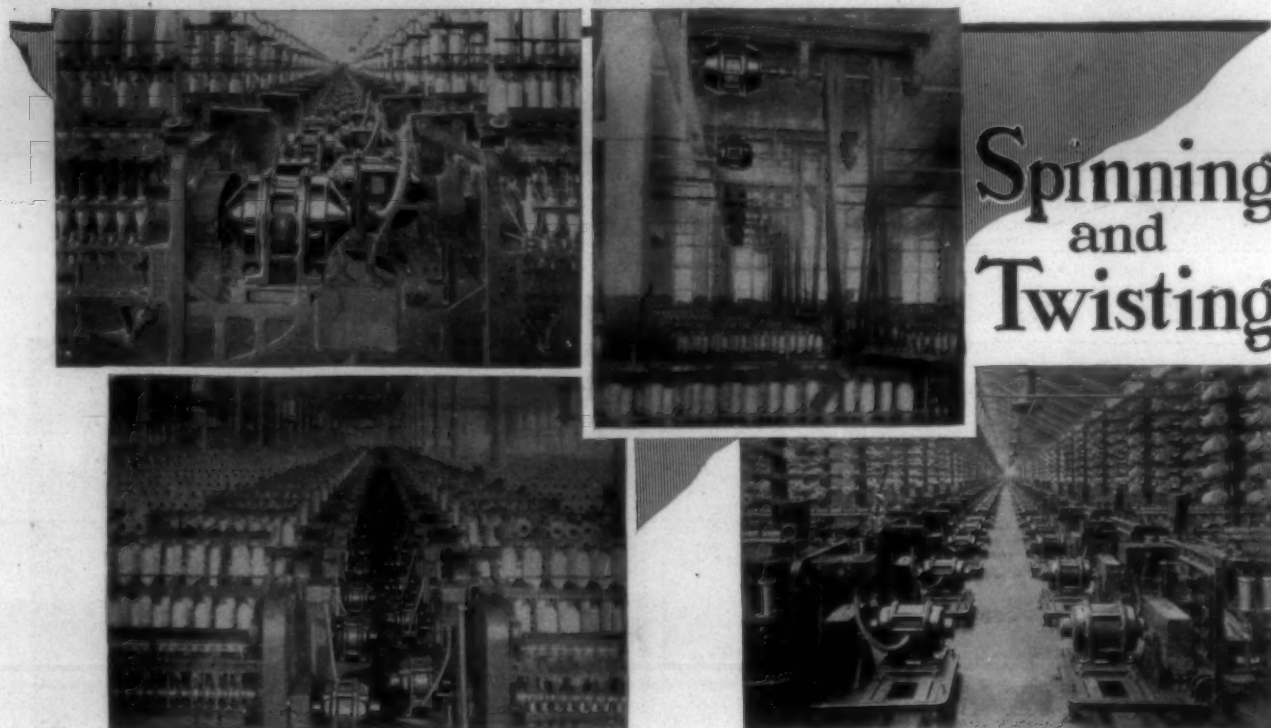
General Electric Company
Schenectady, N. Y.
Sales Offices in all Large Cities



GENERAL ELECTRIC

Cotton

The Motor Way to Greater Production



Spinning
and
Twisting

A G-E Motor to Each Machine

There is no department in the cotton mill where the increased production, which results from the use of constant speed, is more important than the Spinning Room.

G-E Motors, individually applied to spinning frames, quickly show a gain in production from a given amount of machinery. The difference in production from frames individually driven by G-E Motors, as compared with mechanical drive, not only shows a marked increase—but a better and more uniform quality of yarn.



General Electric Company
Schenectady, N. Y.

There is a complete line of special G-E Motors to meet all requirements of spinning and twister frames. These motors are built in sizes from 5 h.p. to 15 h.p., in several speeds, and for all standard voltages. Suitable G-E Control Devices can be supplied with all motors.

44-45
GENERAL ELECTRIC

Cotton

To Maintain Maximum Production Speed



Weaving



Use G-E Individual Motor Drive

There are many mills using G-E Loom Motors in numbers of 1000 and upward—and their method of drive is a motor geared to each loom.

This accepted form of individual drive secures a uniform speed which obtains greatest production from the loom, and the best quality of product.

For this service, G-E Motors are totally enclosed; and have waste-packed, dust-tight bearings; tapered shafts, oil-tempered steel pinions. They are designed for low slip, low temperature rise, and high operating characteristics. A complete line of G-E Motors up to 2 HP, for various voltages and frequencies, are available—with G-E Controllers to suit.



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GENERAL ELECTRIC

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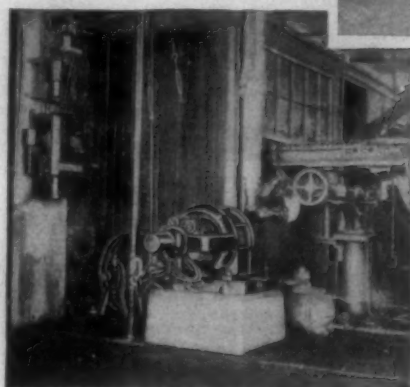
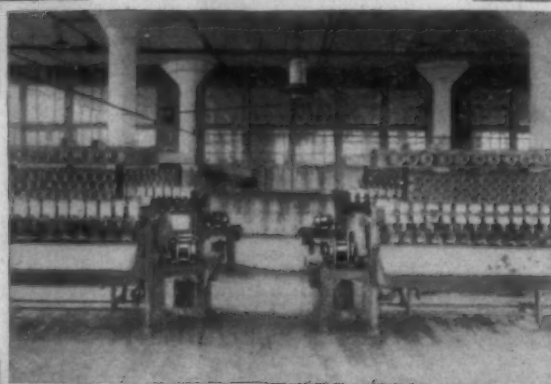
Cotton

Cut Operating Costs At All Points



A Motor for Every Machine

The most efficient operation of cloth printing machine and tenter frame is secured by individual drive with a G-E specially designed variable speed a-c. motor and G-E Push Button Controller



Have G-E Motors and Save

In the light of results which are secured through the successful application of individual G-E Motor drive to the many kinds of textile machinery—is it not good mill operating sense to use a suitable individual G-E Motor for each and every textile machine where an application can be made?

For Cloth Printing machines and Tenter Frames, individual G-E Variable Speed Motors always greatly improve the economy of drive, while the flexibility in speed, and the facility of its control give a large increase in and a higher quality of product.

One printworks, which changed its machinery from steam engine to G-E Motor drive acknowledged an increase in production of over 30 percent.

G-E engineers are always at your service in co-operating with you to obtain the maximum production and best quality of products from your machinery.



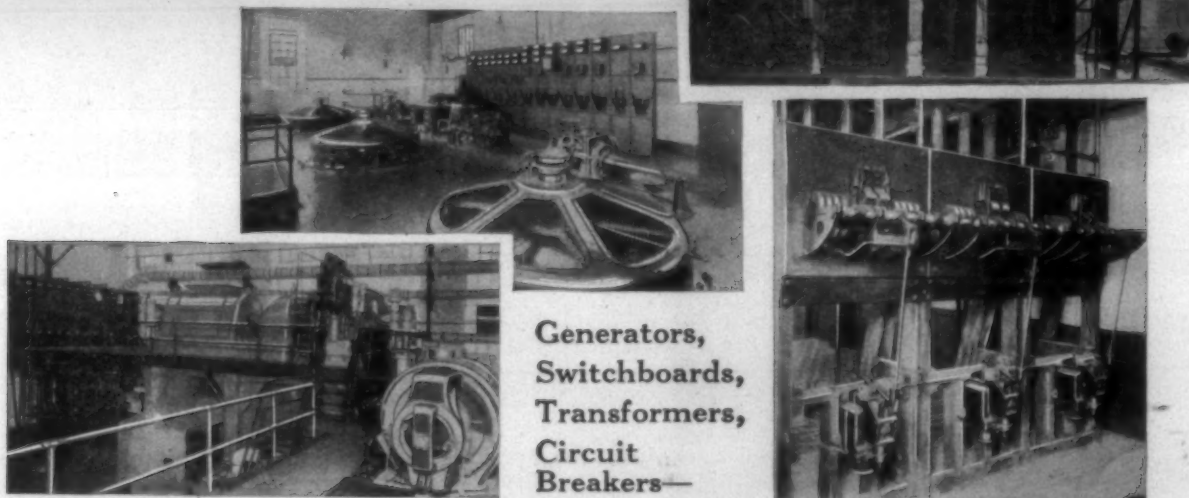
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Sales Offices in all Large Cities

GENERAL ELECTRIC

Cotton

To Best Utilize Electric Power

Power Plant



Generators,
Switchboards,
Transformers,
Circuit
Breakers—

There Is G-E Equipment For Every Power Plant Need

Steam Turbines—Curtis Turbines for extraction of low-pressure steam improve operating efficiency. Used in connection with heating buildings, drying processes, etc. A special form of G-E Steam Turbine is well adapted to driving medium- and low-speed centrifugal pumps, fans, blowers and similar apparatus. Furnished direct-connected or geared.

Water Wheel Driven Generators—Complete G-E electrical equipment for hydro-electric stations is available for manual, remote or automatic control.

Automatic Stations—Automatic Control for water power generators, synchronous converters, motor-generator sets and feeder lines, both a-c. and d-c.

Switchboards—G-E Switchboards for all electrical distribution systems. All equipment being made by a single company centralizes responsibility for behavior of the entire board.

Circuit Breakers—G-E Oil Circuit Breakers for current capacities up to 5000 amp. and for the highest commercial voltages. G-E Air Circuit Breakers are available for any service.

Meters and Instruments—With G-E Switchboards can be furnished all of the various devices used in conjunction

with them—meters and instruments for any service, instrument transformers, relays, switches and circuit breakers, and other accessories. These devices are also furnished separately.

Flow Meters—G-E Flow Meters for measuring the flow of steam, water, air, gas or oil through pipes.

Wiring Supplies—G-E Insulated Wires and Cables for use under all conditions of distribution of electricity in the textile and power plant. G-E Wiring Devices and fuses for every need.

Transformers—On distribution circuits for light and power, Type H transformers are available in standard sizes from $1\frac{1}{2}$ to 200 kv-a. These can also be furnished for special service.

Voltage Regulators—Mills buying electric power from central stations and supplied from unregulated feeders will profit by installing G-E Induction Regulators to hold voltage constant and thereby improve illumination, since a drop of 10% in lamp voltage decreases candle power more than a third. Made in any sizes required and also for outdoor mounting.

General Electric Co.



Schenectady, N. Y.

GENERAL ELECTRIC

SOUTHERN TEXTILE BULLETIN

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United States Warehouse Act

WITH your permission and in order that I may lay the proper background for this United States Warehouse Act, I want to reminisce for just a minute. You men know that this act was passed August 11, 1916, but, like all good laws, it took years of prior discussion before it ever materialized. With the closing of the New York, Liverpool and New Orleans exchanges in 1914, the cotton market apparently went to pieces. On July 31, when the New York exchange closed, December futures were quoted at 10.75. By October they had declined to 7c, and at many interior points the decline was even more precipitous and severe. At interior points in Texas, for instance, middling cotton could have been bought at 5c per pound.

It was that condition which started in the minds of a great many congressmen and senators and a great many producers of cotton all over the country, a thought which finally culminated in the United States Warehouse Act. Less than two weeks after the closing of the New York exchange there was introduced into Congress a bill which provided for the licensing of cotton warehouses. In short order, at intervals of less than a week, several other bills were introduced aiming to accomplish the same purpose, to extend the law to cover not only cotton warehouses but grain, tobacco, wool and other agricultural products. That, mark you, was in August, 1914. Congress discussed and debated and we did not get the United States Warehouse Act until August 11, 1916.

Now, gentlemen, this law as it finally emerged, applied only to cotton, grain, wool and tobacco. It is by its very nature a law that is nation-wide in scope, and it is that one feature among many that gives it a particular advantage as compared to a great deal of State legislation. You will recognize those advantages as I proceed in my discussion.

Principal Accomplishments.

Let me emphasize in this connection that this is not a compulsory law. It is entirely permissive. It rests entirely with the warehouseman to say whether or not he shall operate under its provisions. It provides not for setting the Government up in business but for licensing public warehousemen. It provides a system for supervising

An Address by H. S. Yohe before National Association of Cotton Manufacturers.

the operations of public warehousemen, not with the idea of interfering with business but with the idea of accomplishing three great purposes: First, to encourage the proper storage of agricultural products. On that point it is only necessary for me to mention the fact that the loss which this country has sustained in various years in connection with the cotton crop alone has been estimated to range from \$30,000,000 to \$70,000,000. That loss, happily, is fast disappearing. That loss unfortunately took place largely in the hands of the producer of the cotton. The Federal Warehouse Act has gone a long way toward affording proper incentives to the producer, to the merchant, to the cotton manufacturer, to properly warehouse his cotton.

The second great purpose which the law aims to accomplish is to eliminate unsound and evil practices where they exist in warehousing methods. For the benefit of warehousemen who may be present let me simply remark that it is not the purpose of the administration of the Warehouse Act to impose in any arbitrary manner rigid or unsound or arbitrary requirements. If we did we would defeat the very purpose of the law.

The final great purpose of the act was to establish a form of warehouse receipt for agricultural products which would be acceptable generally to bankers as security for loans. You can see that no banker, whether the commodity is in the hands of the producer, or the merchant, or the manufacturer, cares particularly about making a large loan on that commodity unless he is satisfied that it is properly warehoused, stored with men who are competent to take care of it and who will take care of it properly. He wants to be satisfied that the provisions of the law are being carried out.

The Warehouse Receipt.

Now, let me ask you, "What is back of the warehouse receipt?" As you men probably know, there are, generally speaking, three forms of warehouse receipts for cotton in existence today. There is the warehouse receipt issued under the provisions of the United States Warehouse Act; there is the warehouse

receipt issued under the provision of some State law, and finally—and all too frequently—there is the warehouse receipt issued under no provision or requirement of law, issued by warehousemen who may or may not be responsible, issued by warehousemen who unfortunately too frequently have taken the position that a warehouse receipt should impose certain specific obligations on the part of the storer but no obligation on the part of the person doing the storing. I might show you any number of warehouse receipts issued from time to time in various parts of the country—and no part has a monopoly on it—which stated nothing more or less than, "Received of Sam Jones, 1 bale of cotton." No weight; no identification numbers; no grade; nothing. A proviso is on there to excuse the warehouseman even to the extent of loss of that cotton due to himself or his employees. I think a great many of you men will recall instances that you have heard your bankers relate, where they have held warehouse receipts without any cotton in the warehouse.

Protecting All Interests.

Now, with the Federal Warehouse Act we feel that we have gone farther than any organization or any statute in trying to protect the interests of all parties, in trying to protect the interests of the depositor, in trying to protect the interests of the warehouseman, and finally in trying to protect the interests of the men who may loan on those receipts.

First of all, I mentioned that this law is not mandatory. That gives us the power to weed out the sheep from the goats, the desirable from the undesirable, and that is exactly what we are trying to do. We insist that the warehouseman before he is licensed must meet certain specific requirements. He must have a warehouse that is suitable and proper for the storage of the particular commodity. In the next instance he must have a man in charge of that warehouse who is competent to operate it and knows when the particular commodity is in proper condition and when it is going out of condition. He must have a man in charge of that warehouse who not only knows the tech-

nical side with respect to caring for that particular commodity, but that man must be of unquestioned integrity. It does not do much good to have a good warehouse and have a poor warehouseman, and still less good to have a warehouseman who is dishonest.

Next, the warehousemen must be competent to keep a proper set of records. The officers of the corporation must meet specific requirements. We make it a point to license no organization until we have had an opportunity to investigate the integrity of the management and the officers of the particular organization, their financial standing, their past business relations, and how they have deported themselves in those relations and squared those relations.

We have two requirements by law which are of vital importance to any warehouse receipt, and it is a penal offense to violate either of those provisions. The first is that no receipt can be issued until the commodity is actually in the warehouse; and in the second place that no commodity shall be delivered from the warehouse until the receipt is in the hands of the warehouseman and properly cancelled. Right there is where we lay particular stress in the administration of this Warehouse Act. It is right there where a great many of your losses have come in the past.

Checking the System.

We have gone further to see that these provisions are carried out. In the past year we have instituted a system of absolutely controlling the issuance of those receipts and seeing that they are properly issued. Prior to this year we permitted cotton warehousemen to have their receipts printed in any number and wherever they pleased. Our only requirement was that those receipts complied with the act and the regulations. That made it possible for an unscrupulous warehouseman to turn around and issue any number of those receipts without having any cotton in the warehouse.

That is not a remote possibility. It actually happened about two years ago in a large Southern warehouse. It has happened more than once. Fortunately for us it was not in a Federal licensed warehouse. You men have probably all heard of a certain large cotton merchant who

(Continued on Page 38)

Study of Cotton Goods Specialties

(Continued from Last Week)

The Hand-to-Mouth Buying Fallacy

Those chronic pessimists who gloom about overproduction appear to obtain a similar reaction from their forecast of permanent hand-to-mouth buying fallacies by jobbers, cutters and retailers. The overproduction and hand-to-mouth buying fallacies had their birth when business was barter, and they are twin brothers—the depression twins. They were decrepit with age back in 1893, but they staged come-backs in 1904, 1909, 1921 and 1924, and now the hand-to-mouth twin claims to have found a fountain of perpetual youth in what are termed frequent turnover and minimum inventories. He has been brought up to date by scientific management and all that he needs to do while stocks are being turned over $2\frac{1}{2}$ to $3\frac{1}{2}$ times annually by distributors is to pass goods from jobber to retailer or from mill to jobber as called for. The overproduction twin in the meantime is assumed to be keeping goods piled up at the mills in anticipation of hand-to-mouth's demand.

The scheme has always operated with varying degrees of success until the twins commence to scrap, as they invariably will. Sometimes it is the hand-to-mouth twin who throws a monkey wrench into the smoothly working combination by moving the hand to mouth too rapidly, or with too large handfulls to suit the overproduction twin; but usually it is the overproduction twin who becomes tired of working for nothing and endangers the steady turnover by reducing the supply and jacking up prices.

There can be no economic equilibrium with Dame Nature and the cotton exchanges at one end refusing to stabilize cotton crops and prices and with Dame Fashion and unbalanced industries at the other end making a shuttlecock of demand. The distributor who boosts the hand-to-mouth buying plan forgets that its complement is hand-to-mouth selling or producing. He forgets the experience of such pre-war periods of active business as 1899 and 1907, and the recent boom of 1919-1920. He forgets, too, that there has been no substantial increase since the latter boom in the industry's capacity to produce woven cottons, while during recent months production has been radically curtailed and cutter's and distributor's inventories reduced. He is apparently asleep to the steady expansion of consumer buying power and the elimination of practically all business uncertainty. Possibly he does not know that cotton and its products are relatively cheaper than at any time since 1922, and that also we had an election last week. When these facts finally seep into his consciousness he will understand that the depression twins have had another scrap and

An address by Charles H. Clark, Textile World, Boston, Mass., before the National Association of Cotton Manufacturers.

have been confined by economic law to another period of servitude.

Our Position in Relation to Exports and Imports.

The most casual study of our export and import trade and that their statistics will disclose as the outstanding feature the fact England is our chief foreign competitor in the home market as well as being our chief competitor in the foreign market. It is important, however, in this connection to understand that our position as a producer of cottons and manufacturers for the world's markets is the exact antithesis of that of Great Britain. This country consumes approximately 90 per cent of its cotton manufactures and exports about 10 per cent. Great Britain exports about 90 per cent and consumes about 10 per cent under normal conditions. It is of more than passing interest in this connection to note that if there is added to our estimate of domestic production of woven cottons for 1923, or 7,000,000,000 square yards, 5 per cent to give maximum full-time production, this total will approximate very closely to English production in 1914. British exports in that largest of pre-war years aggregated 7,075,252,000 yards and upon the assumption that this was 90 per cent of total production the latter aggregated 7,861,391,100 linear yards, which in square yards, is very close to our estimated maximum full-time production of 7,350,000,000 square yards.

At no time since 1914 have British exports averaged much more than 4,000,000,000 square yards annually. The productive capacity of the British cotton industry is no larger today than it was before the war, owing to the very slight increase in spindles and looms and a marked decrease due to the reduction in working hours from 55 to 48 weekly. Furthermore, as long as cotton sells at more than a shilling a pound, or approximately 20 cents in this country, British manufacturers will find it difficult to stimulate consumption that will warrant operation of their plants upon a pre-war normal basis. This means that Great Britain has lost to the United States for an indefinite period, if not forever, her vaunted leadership in cotton manufacturing, whether the latter is measured by consuming capacity in bales of cotton or productive capacity in pounds and square yards of product.

That English manufacturers will make a tremendous struggle to regain their former commanding position in the world cotton industry is to be expected, and it is also to be expected that they and other foreign manufacturers will be seeking constantly opportunities to invade the United States market. They

know this market to be the richest in the world with a per capita consumption of cotton goods far in excess of that of any other country. Great Britain's largest markets are peopled by the poorest of the world's inhabitants, whose per capita consumption of cotton goods is meagre compared with ours despite the fact that cotton cloths are their cheap article of clothing.

The World's Richest Market.

That foreign manufacturers should seek through their importing representatives in this country every opportunity to break down our tariff wall is not surprising and we are well aware that English manufacturers have already made some progress in undermining the rates of the present tariff on woven cottons. They have also demonstrated their willingness to make considerable sacrifices in profits to gain a strong foothold for their products in this the richest markets of the world, as is attested by the tremendous increase of imports during the last two years. In our attempt to restrict competition of foreign goods in the domestic market and to maintain the American scale of wages and standard of living, we must not only insist upon an adequate protective tariff, but see that the tariff is effectively administered.

It seems strange that there should be one characteristic of our production, and one that should provide a selling argument of equal value in foreign and domestic markets, that has never been adequately capitalized by cotton manufacturers or the textile industry as a whole. I refer to the fact that because this country is the richest in the world and has the largest per capita buying power, it follows as a natural sequence that the average quality of its industrial production is superior to that of any other country in the world. The most illiterate inhabitants of all foreign countries are well acquainted with our high per capita wealth and take advantage of it whenever they come into commercial contact with an American. That knowledge of the high average quality of our products is not equally well established at home and abroad is a fault for which we must all shoulder some responsibility and strive to overcome. Get this idea across, and see that all worthy products are marked "Made in U. S. A." and we shall have a competitive advantage that will go far to offset in foreign markets the price advantage of the products of cheap foreign labor. When that idea has been capitalized the competitive advantage that now accrues to foreign products in domestic markets as the result of the law enforcing marking of the country of origin on all imported goods will be eliminated. Such identification of imported

goods will then become a mark of inferiority and a competitive disadvantage.

Export Market Deserves Careful Study.

Our exports of woven cotton since 1914 have ranged from a little over 800,000,000 linear yards in 1920 to a little over 464,000,000 square yards in 1923, and although the survey of the world situation demonstrates plainly that the domestic market must continue our chief market for exploitation, it is equally plain that we should spare no effort to broaden export outlets. In meeting foreign competition in foreign markets on either style or non-style goods we must rely largely on skillful merchandising, quality of product and ability to meet foreign prices through large scale production.

Mass production operates to our advantage in export trade in gray goods and in the most staple lines of finished goods, but is of little avail to the individual mill in the export sale of printed and woven patterned fabrics. Our chief competitors, the English manufacturers, having their production organized to meet the diverse requirements of an export trade that absorbs 90 per cent of their goods, are always eager and able to meet the varied demands of the latter. The proportion of our export and domestic distribution being exactly the opposite of England's with export trade a sort of side line, we are organized to meet domestic needs most efficiently and can give export demands equal service only when they correspond closely to those of the home market. One of our most important export problems is to so organize our production and selling methods as to overcome these natural handicaps, and strive to give foreign buyers service equal to that of principal competitors and at competitive prices for equal quality of product.

In suggesting possible ways and means of solving the problem I am merely endorsing plans, that, in large part, have been proposed previously. They involve co-operative production of the goods exported, and centralized selling and financing. By co-operative production I have in mind two objectives: first, the co-operation of a group of mills making the same goods and the reservation by them of a certain proportion of their productive capacity or product for export through a central selling agency; second, co-operation of a group of producers whose final product is of the most advanced character that can hope to find an export outlet, this group to operate on a one profit basis.

Certain tire and table oil cloth manufacturers are already organized upon the latter basis, producing everything from the gray goods to the finished product, and are eminently successful in meeting foreign competition abroad. That which they do as individual producers can

(Continued on Page 43)



Our New Southern Plant

We take pleasure in announcing to our many friends in the South the completion of our new branch plant at Greenville.

The erection of the plant is a natural development—the result of the growth of our business in this section. Our loom harness equipment has already been installed in many Southern mills—both new and old.

There seems to be a general appreciation among the mills of the importance of using the most up-to-date and efficient equipment as a means of meeting competition.

An up-to-date Reed Plant has been installed in the new factory, permitting us to serve the Southern Manufacturers with a complete line of **pitch band and soldered Loom Reeds**, together with:—

Slasher Combs	Warper Reeds	Beamer Hecks
Striking Combs	Lease Reeds	Dresser Hecks

Prompt shipments guaranteed to all points South.

Our Staff consisting of expert Textile men are at your service; any weaving problem confronting you can be solved by consultation.

STEEL HEDDLE MANUFACTURING CO.

MAIN PLANT

21st and Allegheny Ave., Philadelphia, Pa.

SOUTHERN PLANT

Steel Heddle Bldg., 817-31 E. McBee Ave., Greenville, S. C.

Eastern Office:—634 Grosvenor Bldg., Providence, R. I.

THE STEEL HEDDLE LINE

"Duplex" Loom Harness (complete with Frames and Heddles fully assembled).
Drop Wires (with Nickel Plated, Copper Plated or Plain Finished).

Heddles—Harness Frames—Selvage Harness
—Leno Doups—Jacquard Heddles—Lingoes—
Improved Loom Reeds—Leno Reeds—Lease
Reeds—Beamer Hecks—Combs.

Studying the Job

ONE of the subjects discussed at the recent meeting of the National Association of Cotton Manufacturers was "Studying the Job." There were two papers on this subject. One of them was by J. M. Barnes, of Boston, this having been published in this column. The second address, on the same subject by William O. Lichtner, was as follows:

Your chairman, Mr. Greene, I think, has very ably summed up the various factors that come up in the paper I prepared on "Studying the Job." I believe that it is a very healthy situation, however, to keep on hammering on this particular phase, because as we get around various industries, we find that there is a great need for more intensive work being done along the studying of the job.

The subject of "Studying the Job" is very timely, and deserves mature consideration by every branch of industry. The cotton manufacturing industry can very profitably consider this subject, for it is probably the outstanding industry where one phase of studying the job, namely, automaticity of machinery, has been developed and perfected to a very high degree.

Studying the job applies to every phase of industry, whether it is merchandising, purchasing, overhead, plant, equipment, materials

in process, supervision and office help), or direct labor. All of these factors affect the balance sheet, and it is only in recent years that a few of the most progressive concerns have studied the job in any large way on the important factor of distribution, for instance. Similarly, how many have studied the job of purchasing, and determined the purchasing function is on an equal footing with sales, and that like sales, the purchasing function has something to sell or exchange? It has money to sell or exchange for goods, and is interested to get as much goods as possible for the dollar.

Instead of waiting for the salesman to come to him, the purchasing agent can very profitably visit the plants manufacturing the raw products he buys, and find out how he can utilize certain raw materials which can be purchased at a low figure, in place of the regular material always used. In one instance, lately, a purchasing agent for a large farm implement machinery concern found that by visiting the steel mill every two weeks he saved hundreds of dollars in interest on invested money by being able to pick up certain lot shipments of special sizes of steel when he needed them. This avoided putting in his orders ahead of time to fit in with

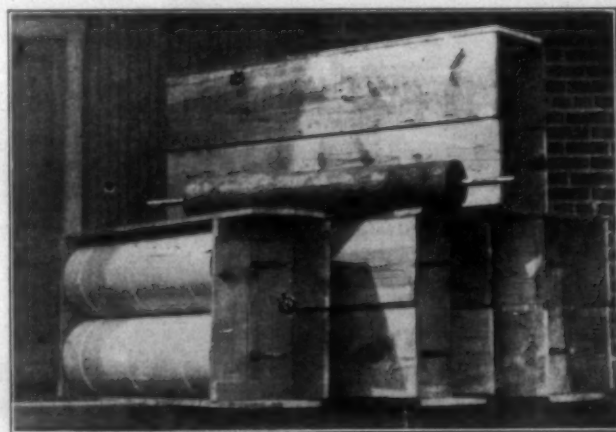
the mill's rolling dates, and then having to take the steel when it was rolled and paying for it by the 15th inst., although it would not be used till, sometimes, a month or more later. The saving of interest of even one-half of one per cent on materials purchased each month to the amount of \$500,000 means a saving of \$15,000 a year.

In distribution comparatively little has been done as yet in studying the job. This subject was very ably discussed by one of our foremost New England manufacturers at a sales conference not long ago. His company has compiled accurate statistics from which they were able to draw their conclusions. To illustrate, assume that formerly the manufacturing cost was \$1.00 and the distribution cost was \$1.00. They found that through studying the job of manufacturing they were able to reduce their manufacturing cost from \$1.00 to 89 cents. At the same time they found that their sales cost had increased from \$1.00 to \$1.21. This is more or less typical of most concerns, and it is in this field of studying the job of distribution that the greatest work is going to be done in the next ten years, just as the development of the field of studying the job of manufacturing has been well begun in the past ten years.

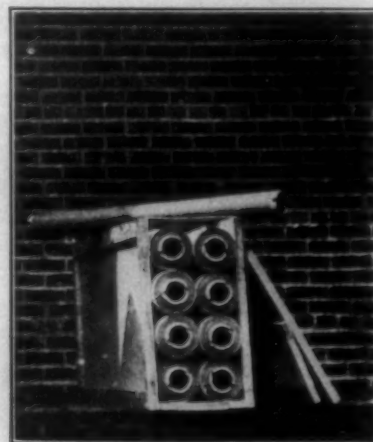
Let us take the cotton manufacturing industry and see what can be done in studying the job. First, take raw materials. The balance sheet here shows the item of cost of the raw material of cotton to be a very large item, running in many mills high into eight figures, and its relative value to the item of labor is, say, ten to one. In the purchasing of the cotton, naturally much attention has been directed to studying the job. And why not, as one mill agent put it, for he could save his company several hundred thousand dollars a year if he could buy his cotton at a cent a pound less than his competitor. Why should he, then, be interested in studying the job of labor, which the balance sheet shows only amounts in total to seven figures?

But suppose the saving in labor through studying the job amounted to only 10 per cent. This would mean \$200,000 a year, and of course, be well worth saving, since, after all, the amount of saving which can be made from any source is relative. In some cases it is the accumulation of small amounts from several sources that is of more help to a concern than a saving of a large amount, made only occasionally, when conditions favor a "killing" in the purchase of materials.

(Continued on Page 16)



THE CLUMSY SHIPMENT
HEAVY BEAMS



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SILK CORPORATION

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FACTS

by Chas. E. Carpenter

"Replying to your inquiry regarding VIM Leather Belt that we are trying out, would say that the best oak tanned belts that we have had on this particular place have never lasted more than eight weeks, without being taken up and repaired, but your belt which was put on 6 months ago, has not had to be touched yet and there are no indications of wear on it."

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WE can furnish a reproduction of the original of the above quoted letter, which comes from one of the largest Cotton Mills in the South.

Formerly we pasted all such testimonials in a book and kept them in our Library, but they have become so numerous as to no longer be a curiosity. One might as well preserve testimonials of steel being more durable than cast iron, as to longer preserve evidence of the superiority of VIM Leather Products over those made from oak leather.

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Those who formerly condemned VIM Leather Belting as being generally inferior, being no longer able to make such claims in the face of the positive evidence of such an array of satisfied users, are now claiming that VIM Leather Belting is the best as claimed, but that it is too good for normal service.

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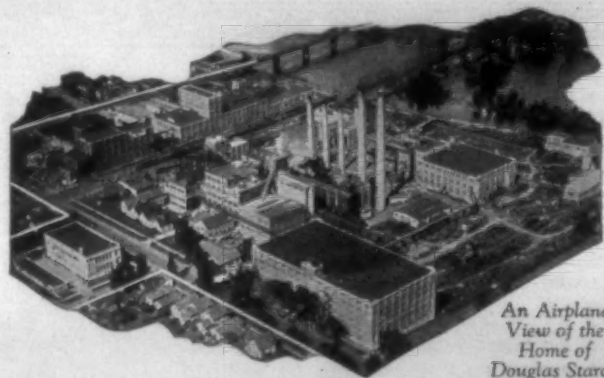
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Future of Vistra---A New Fibre

ADDRESSING the members of the British Managers of Textile Works at their recent annual meeting at the Textile Institute, W. H. Canning, of Manchester, explained in detail the new synthetic fiber vistra. The subject of his talk was "Vistra: The New Cotton Synthetic Fiber and Its Possibilities." The Textile Mercury reports on the meeting as follows:

"B. Robinson who presided, stated that this was an important matter to the cotton trade, and they would have to consider to what extent synthetic fibers would help them. Personally he thought that they would get considerable help from these yarns.

"Mr. Canning said this was a question which was in the minds of Lancashire manufacturers at the present time. He had gone there with the intention of explaining and showing some samples of Vistra as it was in the yarn and in the fabric. Vistra, said the speaker, was merely the registered name of the new synthetic fiber. All synthetic fibers, as they knew, had come very much to the fore in recent years. This was probably due to the shortage of raw materials, and partly to the excellence of the results which had been obtained. Vistra was a synthetic fiber which was made on a similar process to ordinary viscose artificial silk, of which most of them had some experience in Lancashire, some with success and others with rather expensive results. Although Vistra was manufactured on the same process as ordinary artificial silk, he wished to emphasize that it must not be confused with artificial silk.

"Artificial silk had a bright metallic luster but Vistra had a luster like real silk, and more in keeping with an imitation of the real article than artificial silk. The fiber had many advantages and many uses, and was, therefore, more useful for use in special industries and in the making of certain fabrics. The people who had used Vistra had come to the conclusion that its future lay in Lancashire. It had been used on the continent, chiefly in Germany, although the spinning of the yarn had not been too successful by various methods. Several people on the continent who have seen samples of the yarn made in Lancashire state that only in Lancashire could they make Vistra to the fulfillment of their expectations.

Differs From Viscose Silk.

"Viscose silk was wood pulp, and so was Vistra, but the chief difference was that viscose was spun in a long continuous fiber, whereas Vistra was spun in one definite length of 50 inches. This fiber, having been spun, was cut up to the length of staple required. For the cotton industry the length was from one inch to one and a half inches. So far it had been spun with moderate success on the continent by the silk, wool, and ramie processes. Silk was expensive, and therefore they looked to Lancashire to spin Vistra on the cotton spinning process. Vistra yarns were nearest approach to silk spinning.

"There were three types of Vistra at the present time, 1, 1a, and type 3. There was a type 2, but for some reason there was no demand on account of the price. The base of Vistra being wood pulp he thought they would agree that the possibility of a shortage of raw material was very small, and could be disregarded, and it had been said by a few people who had taken it up that Vistra would be a factor in Lancashire, especially during a period of shortage of raw material.

"The raw material could be cut, and they could also supply it in cone top in sliver. This latter process was only done abroad, but they were negotiating in England to get cone top done, and it would be easier for cotton spinners. The price of the raw material was at present fixed for the next two years.

"Another great difference between artificial silk and Vistra was that artificial silk would retain no heat, but Vistra would retain the heat. As it was cut up a yarn was built up with the natural air cavity, and the heat was retained in these air pockets. Ordinary artificial silk was always cold, and did not retain the heat.

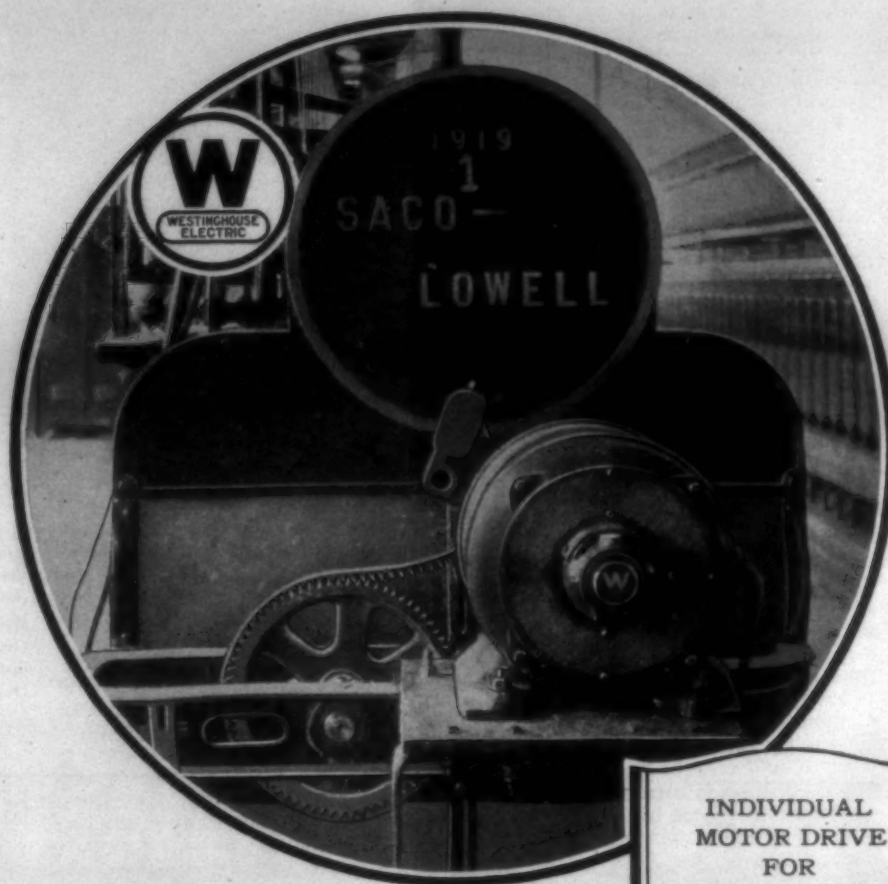
Spinning.

"Regarding the counts of Vistra, two-fold 100s had been spun in England, but on the continent they had spun two-fold 200s. It had been spun on the silk process, which was very dear. Taking Vistra filament for filament with viscose silk, Vistra was about two and a half times the strength of cotton, and therefore in the finer counts it had only been possible to use it in the two-fold, whether weft or twist, on account of the fibers not being strong. That was another point that Lancashire, with her experience and knowledge, could overcome. It had been suggested that a small portion of cotton should be mixed with it to give it strength. There was no difficulty in dyeing, and it could be dyed like ordinary artificial silk. There were, however, a few modifications required in the finishing. He thought this would be overcome by a Manchester firm of dyers. It was a secret on sale from a German firm of dyers.

"Passing on to the uses of Vistra yarns, the speaker said that having been spun on cotton machinery, it could be supplied in hank, cheese, cone, pirn, or beam, and there was no difficulty in doing these processes either in England or abroad. It could be used for specialty fabrics, such as pile fabrics, included in which were velvets, tapestries, damask, curtains, millinery, hatter's plush and ordinary velvets and velveteens. Velvets were made in Crefeld from Vistra which according to several houses in London, were as fine as chiffon velvets, and only about half the price. Vistra was an article which he thought Lancashire ought to take up seriously, even if it was on account of the fabrics made from it.

"He did not say it would displace cotton, but he did say that in certain classes of goods, where real

(Continued on Page 18)



Individual Motor Drive for Roving Frames—

A New Development by Westinghouse

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Westinghouse

Studying the Job

(Continued from Page 12)

Let us take, for the moment, this feature of studying the job of labor, because it is the one which has had much consideration during the past ten years, and today still gets the major attention in the problem of lowering commodity prices. It is of special interest here in New England, where the statement is often made that New England cannot compete with the South, where wages are so much lower. If this is the case, and all other factors are equal, the answer would be simple and direct—cut the wages of the New England mill workers. This is not as simple as it sounds, for the New England worker has to pay just as much for his food, rent, clothes, etc., as he did without the cut.

A reduction of wages without a reduction in the cost of living can only result in one thing, and that is a vicious circle. If a workman's earnings are cut down, his purchasing power is reduced, and he buys less. The clothier, shoeman, butcher, and everybody, disposes of less, and instead of each one lowering the cost of his product, he must raise it in order to absorb his overhead over a smaller amount of product, which all means further increasing the cost of living instead of lowering it. Our experience in many lines of industry has proved consistently that the surface has been scarcely scratched in studying the job of manufacturing. If prop-

erly done, it makes possible the reducing of unit costs of production without reducing wages one cent. In most cases even raising the wages may be effected, which means increasing a workman's purchasing power. We thus get away from the vicious circle which a reduction of wages brings about.

Skilled and Unskilled Labor.

A business enterprise today employs many individuals, from the highly skilled (whose work can generally be measured), to the so-called unskilled (whose work is not so susceptible to measurement), which is largely contributory and necessary, in order to allow the skilled employees to operate. It is not difficult to realize how the job requiring skill has an effect on the balance sheet; in fact, this is realized to such an extent that reductions in wages are right now being considered as the means to an end, to widen the spread between actual costs and the price at which the goods can be sold.

If there is any job in a mill that does not affect the balance sheet, it then has no place on the payroll sheet either. It is on account of the multiplicity of jobs in a mill that it is difficult for us to see clearly what functions affect the balance sheet, and why. If we will assume, for the moment, that a business enterprise is run by one man doing all the work, it will clearly be realized that the success or failure of the undertaking is the effect his performance of each function has upon the balance sheet.

The answer to the problem is to study the job, and find out everything about it. To do this, it is necessary to (1) make an analysis of the factors of the job, (2) make a measurement of the performance of the job, and (3) perpetuate the results obtained, through making an analysis and a measurement of the performance.

The first step in making an analysis of the factors of a job is something which is but seldom done properly. The procedure generally followed is to determine through studying the past records of performances the average output the company has received per employee per hour, day or week. Going over production records is merely reading very general history of the company's past performances, which may be had, good, or indifferent. These records will show large variations of production per employee, from day to day, without any apparent reasons for such. When the superintendent, foreman, or workman is asked to explain a good day's production which occurred some time in the past, he can always account for it by merely saying that the yarn used at that particular time came extra good, or the weather conditions were just right, or something else which may or may not have any effect on the product, except in the mind of the operator, or it may perchance be one of the traditions of the trade. The only thing, then, is either to consider the average production as a fair return the company can expect from its

machinery and equipment, or take the highest record and reduce this by some arbitrary per cent, and consider this the quantity they should receive.

The Workman and the Company.

A study of this kind is very unsatisfactory, and generally results in nothing really worth while. If the operator is told, therefore, that he must produce a greater quantity than he thinks he can produce without putting in more effort on his part, he merely says, "It can't be done." If the work is already on a piece rate basis, and the rate is cut so as to force him to do more in order to get the same wage as before, he either has to use his own initiative to get more production or take less pay. This method puts the whole responsibility up to the workman, which in most cases is unfair, for he has no jurisdiction of any work except what he himself does, and must stand for all the delays and holdups due to poor management in not supplying him with the proper quality and quantity of materials, poor upkeep of machinery, etc. Do you blame the workman then, for matching his wits with those of the company when the company's representatives go out in the mill to study his job with a view to lowering unit costs?

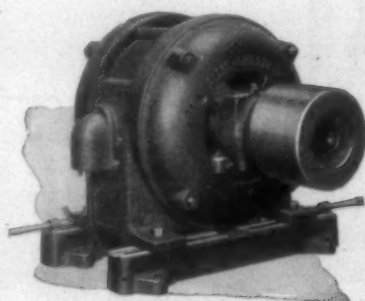
Analyzing the Job.

Studying the job means analyzing the job in minute detail and learning what the factors are, and to what degree they affect the balance

(Continued on Page 24)

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Type "ARY"
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Motor

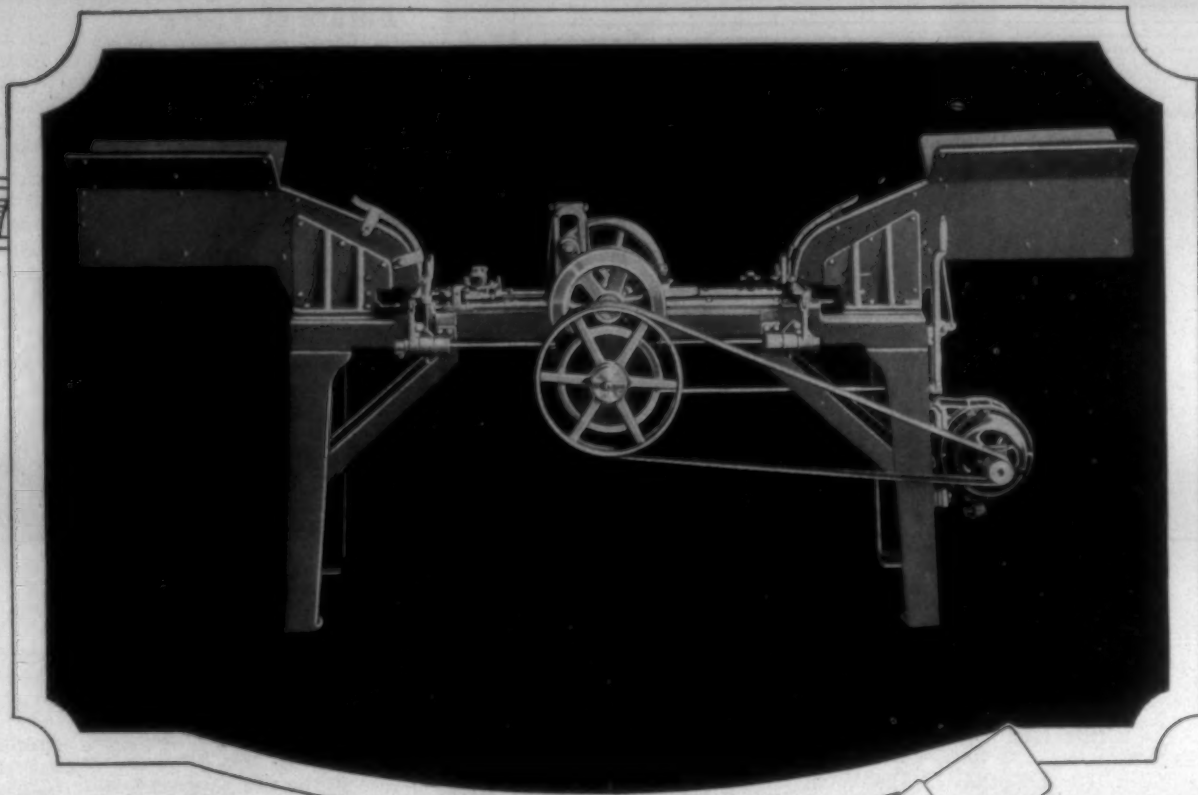
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Future of Vistra

(Continued from Page 14)

silk was very expensive, they would be able to make cloth which was within the means of the poorest buyer. He referred especially to the native buyer, who could not buy the real silk article. Another important point was that they would be able to mix it with cotton in the cases where mercerized yarn was required. If they had a certain amount of cotton mixed with Vistra they got a yarn practically as strong as cotton, and with a greater luster than mercerized yarn. With regard to dyeing, it had been put up to certain mercerizers in this country, who found that a cloth dried actually with the same amount of luster with 2-60s metric as with 2-60s Egyptian cotton, both had been dyed navy blue. Another point was the warmth of Vistra in the case of hosiery, underclothing and general hose.

"In conclusion, Mr. Canning said that they had got the spinners, but they wanted to get manufacturers interested in the matter."

"F. Wright asked whether the lecturer meant by the silk process that it was on the silk waste process that Vistra was spun? What was the length of the fibers on the silk process and the cotton process, because it seemed to him that the length of the fiber would have a direct effect on the luster of the yarn?"

"Mr. Canning replied that the average of cotton was about 1½ inches, for the woolen industry three inches, and the silk process six inches. It could be done on the worsted process, for which the fibers were shorter."

Cost of Material Varies.

"The lecturer, replying to a question as to the cost of the material, said that it varied with the type. The prices were fixed from about 3s 9d down to 3s. The price of the yarn for 2-3s cotton counts was in the neighborhood of 5-6 pound."

"A member stated that a few months ago he put a sample of Vistra through his machinery and he had no difficulty at all. The great trouble was the price, which had rather upset one of his customers. He was sure that if they were going to mix it with cotton they were going to lose some of the luster. He wanted to know how it washed and how did it wear."

"Mr. Canning stated that he was sure there was some mistake about the price which was mentioned by the last speaker. Regarding washing, it should be treated like ordinary artificial silk, but it would not stand mangling. Regarding the luster, much depended on the amount of cotton mixed with Vistra. He had seen a mixture of 35 per cent cotton only, and the luster was infinitely better than they got on mercerized yarn, and stronger than 40 per cent Vistra, and at the same time was strong enough for the hosiery for which it was required."

"Mr. Myers said he did not think it was quite right to compare artificial silk with real silk. Artificial silk would not wash like real silk."

"Mr. Canning said on one would think of putting real silk through a

mangle. He had had artificial silk garments returned, but the people admitted they had been mangled."

"W. B. Crompton asked whether this yarn was supplied in the single yarn or only in the two-fold."

"Mr. Canning replied that it was supplied in the single in Lancashire at 50s, but on the continent they could do it up to 120s. The only difficulty was that on account of the fineness of fiber it was only possible to use it in the two-fold."

"Mr. Stafford asked a question regarding the sizing materials for Vistra, to which the lecturer replied that the same materials were used as for artificial silk, and with these they could not go far wrong."

Used With Cotton Machinery.

"A member, who spoke with some experience of having used Vistra, remarked that the lecturer stated that Vistra could be used with cotton machinery just as if it was cotton. He had run some Vistra through, and unlike a previous speaker, they had had some difficulties, which were not insuperable by any means. A very fine yarn was produced, but the ordinary cotton spinning mill lap had to be made, in which they found a great difficulty. When it was put through the scutcher with the rack heads down it took three men to pull the slip roller out. Yarn was made on the scutcher with the rack heads up, and slight pressure put on. They made what was termed in the card-room a 'lick in' lap. Once they got through that process and got on the bobbins they got on very well, and a beautiful yarn was produced. As Mr. Wright had said, it was their opinion that the longer the fiber the better the luster although they began to realize that it was not the metallic luster of viscose, but practically the effect that real silk had. Experiments were going on, and he did not see why it should not be a success. The resultant effect of the yarn in the cloth was beautiful. He would like to know where it was being spun commercially, and whether it was going through the ordinary flat card."

"Mr. Canning said that in two cases he knew they cut out the scutcher and simply used the Buckley Opener."

"A member remarked that the fiber did not require cleaning, as it was already clean. In his opinion, the wool process was the correct thing."

"Another member expressed the opinion that as the fiber required no cleaning the flat card was not the correct machine, but the roller clearer. They spun 20s single, and it was very good indeed—mule spun."

"A member said there was no waste in it and they wanted to keep every fiber in the production at the front, and when they simply put it through the scutcher with the rack heads down, without and weight on, they formed a lap, but still they got one which would not run off easily on the card. They went up to 46s cotton counts, and had since made 120 yards of cloth which had finished very well. Regarding the price, he said he had thought that it would drop when it got going, but was surprised to know that the price had been fixed for two years."

"Something New"

THE public is the customer of the textile plants. It makes no difference how many in between sales are made if the consumer does not buy your goods, your plant is not busy.

Now think of the thing which influences the purchase of a piece of goods or a made-up garment. Picture what a woman does when she is first attracted to a piece of fabric. She feels it. We would say she sees what kind of a "hand" it has. She looks at it closely. This feel and close look are often the acts which influence the purchase of a fabric or garment. Think of it—the part that the finish plays here—for the salesman or woman to mention that it is "something new."

Remember that the public likes variety, and that there are no better sales words in merchandising than "something new."

We'll be glad to help mills find "something new" in finishing their products. And finding "something new" does not necessarily mean new machinery. Simply by rearranging machines already in use we have in numerous instances been able to find that "something new" which has made plants buy.

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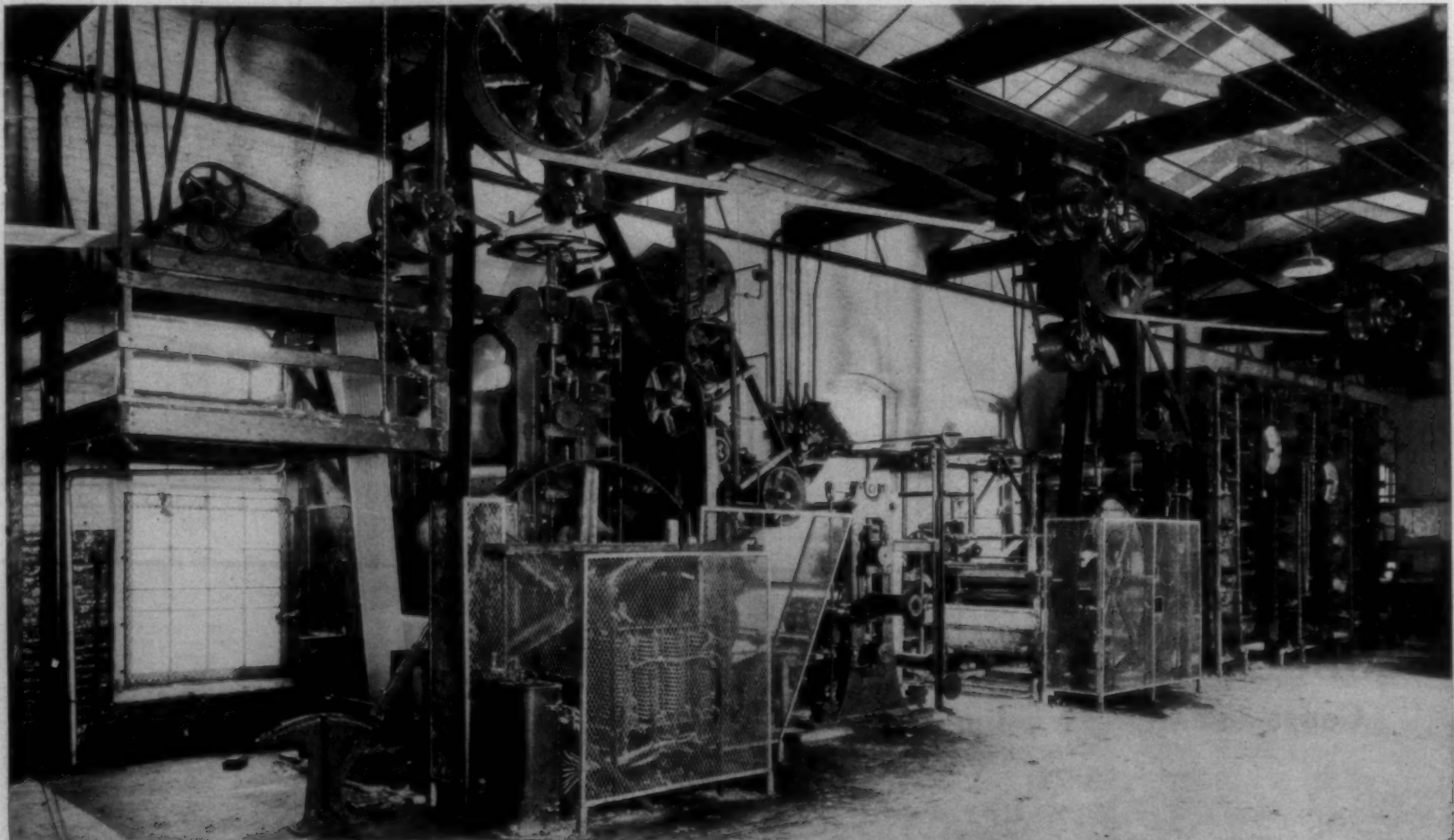
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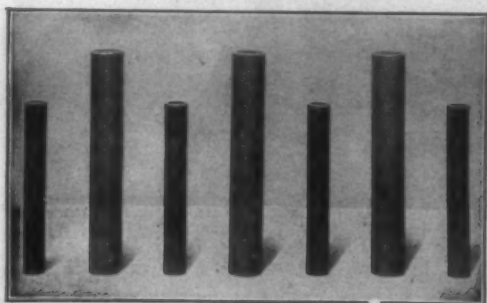
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Carding and Spinning

By George M. Ivey

Copy Revised for Third Edition.

(Continued from last week)

RULES TO FIND CHANGE GEARS

Twist constant divided by twist equals change twist gear.
Draught constant divided by draught equals change draught gear.
Traverse constant divided by twist equals change traverse gear.
Tension constant divided by twist equals change tension gear.
Roll constant divided by twist equals revolutions of roll.
Frame constant multiplied by top cone gear equals twist constant.

Production.—The calculation for production is very simple, being only a matter of speed of the front roller. It seems to us to be a waste of time to calculate this speed from that of the main shaft, as it is a very easy matter to count the actual speed or to get it with a speed indicator.

Rule.—Multiply the circumference of the front roller by the speed per minute, the minutes in an hour, the hours in a day, and the number of spindles in a frame. Divide the product by 840 multiplied by 36 and the number of roving.

Production of Roving Frames for 10 Hours

TABLE FOR 10 AND 9-INCH SPACE

Number of Roving	Twist Per Inch	Rev. of Front Roller	10-in. Space Number of Hanks	Number of Lbs.	Rev. of Front Roller	9-in. Space Number of Hanks	Number of Lbs.
.20	.54	307	11.7	58.7	—	—	—
.30	.66	250	12.5	41.6	—	—	—
.40	.76	220	12.5	31.1	266	12.7	29.3
.50	.85	195	12.0	24.0	238	12.0	24.0
.60	.93	178	11.6	19.0	219	11.9	19.9
.70	1.00	165	11.0	15.7	203	11.8	16.9
.80	1.07	154	10.6	13.0	188	11.5	14.5
.90	1.14	144	10.1	11.2	174	11.1	12.4
1.00	1.20	138	9.8	9.8	168	10.9	10.9
1.10	1.26	—	—	—	161	10.7	9.7
1.20	1.31	—	—	—	154	10.4	8.7
1.30	1.37	—	—	—	150	10.0	7.8
1.40	1.42	—	—	—	—	—	—
1.50	1.47	—	—	—	—	—	—
1.60	1.52	—	—	—	—	—	—
1.70	1.56	—	—	—	—	—	—

NOTE.—The front roller for 10, 9, 8 and 7-inch space is $1\frac{1}{4}$; for narrower space $1\frac{1}{2}$.

TABLE FOR 8 AND 7-INCH SPACE

Number of Roving	Twist Per Inch	Rev. of Front Roller	8-in. Space Number of Hanks	Number of Lbs.	Rev. of Front Roller	7-in. Space Number of Hanks	Number of Lbs.
.80	1.07	214	12.7	15.9	—	—	—
.90	1.14	186	12.2	13.6	—	—	—
1.00	1.20	192	12.2	12.2	207	12.3	12.3
1.10	1.26	180	11.7	10.7	200	12.3	11.1
1.20	1.31	175	11.6	9.7	194	12.1	10.1
1.30	1.37	163	11.6	8.5	182	11.7	9.0
1.40	1.42	158	10.9	7.7	175	11.4	8.2
1.50	1.47	152	10.6	7.0	169	11.2	7.5
1.60	1.52	147	10.3	6.4	163	11.0	6.9
1.70	1.54	—	—	—	162	10.0	5.9

Production of Roving Frames for 10 Hours

TABLE FOR 6 AND 5-INCH SPACE

Number of Roving	Twist Per Inch	Rev. of Front Roller	6-in. Space Number of Hanks	Number of Lbs.	Rev. of Front Roller	5-in. Space Number of Hanks	Number of Lbs.
1.00	1.20	271	12.9	12.9	—	—	—
1.25	1.34	239	12.5	10.0	—	—	—
1.50	1.47	219	12.2	8.1	—	—	—
1.75	1.58	207	12.0	6.9	—	—	—
2.00	1.70	187	11.2	5.6	216	11.7	5.9
2.25	1.80	181	11.1	4.9	203	11.3	5.5
2.50	1.89	168	10.5	4.2	191	11.1	4.4
2.75	1.98	161	10.2	3.7	183	10.8	3.9
3.00	2.08	155	9.9	3.3	175	10.6	3.5
3.50	2.24	—	—	—	165	10.2	2.9
4.00	2.40	—	—	—	150	9.6	2.4
4.50	2.54	—	—	—	144	9.3	2.0
5.00	2.68	—	—	—	134	8.7	1.7
5.50	2.81	—	—	—	129	8.5	1.5
6.00	2.81	—	—	—	129	8.5	1.5

(Continued on Page 32)

SACO - LOWELL

LARGEST MANUFACTURERS OF TEXTILE MACHINERY IN AMERICA



Picker Room, White Oak Mills, Proximity Manufacturing Company, Greensboro, N. C.

Saco-Lowell Pickers built at our Kitson Plant are used by the world's largest manufacturers of denims.

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SALES OFFICES
1220 MINT STREET
CHARLOTTE, N. C.

MASONIC BUILDING
GREENVILLE, S. C.

Improvement in Gaston County

Gastonia, N. C.—Local cotton mill executives are much encouraged over the textile outlook, compared to the condition existing three months ago. At that time most of the mills in Gaston county were either shut down completely or else operating on part time, and gradually losing money instead of showing profit. At present there is no great amount of profit, but at least there is a fair demand for their product and they are doing a little more than "breaking even."

Prices of local mill stocks, generally a fair barometer of business, have been on the upward climb for the past month or so.

One executive seen, while admitting that the general situation was much better, was firmly of the opinion that there is still an over-production.

"We are all manufacturing more than the world can consume, and if every plant in the South could afford to shut down for two or three months, and still keep their help paid, it would be the best thing that could happen to the textile industry," he said. "There's just too much stuff being produced. You can't get by the economic law of supply and demand, and the world does not want or need as much as we are turning out," he concluded.

However, there is a more optimistic tone to the talk among textile executives and they are hoping that, with colder weather, business will take on a more decided spurt.

One big chain of mills is now running full time, night and day, with the exception of one mill running only in daylight. The biggest mill under one roof in the world, making automobile tire fabric, is said to have enough orders on hand to last them the next nine months. A new mill spinning the finest yarn possible in this section, number 150s, is running in full blast.

The yarn market is slowly catching up with the cotton prices. The cotton goods situation, taken altogether, is on a much more satisfactory basis.

There are 16,664 employees now working in local plants at a daily wage of \$33,000 per day. The sum of \$18,000 is paid daily by mills inside Gastonia. Only two mill chains have cut wages recently.

Gaston county mill owners who make regular trips to the yarn centers in the North report that the brokers are willing to book advance orders at prices showing reasonable profits for the producer. However, nothing like the big war-time profits of 1918 and later are expected by local men.

Prices quoted by stock and bond brokers on Southern Cotton Mill Stocks, as well as Gaston county shares, are showing more activity. The immediate future will most likely show stocks selling at higher prices, according to Gastonia men who study the situation constantly.

CLARK'S TABLES

of Manufacturing Margins on Weaving Yarns

Tables below are compiled by deducting from net returns from yarn sales the total cost of cotton.

NET RETURNS for weaving yarns are selling prices less 5 per cent commission, 3 per cent discount and freight.

TOTAL COTTON COST is price of cotton with cost of 15 per cent waste added or is the cost of cotton per pound of yarn.

MANUFACTURING MARGIN is **NET RETURNS** less **TOTAL COTTON COST** and is the amount that is left to cover wages, salaries, power, supplies and all other overhead.

TO USE TABLES—Find selling price of yarn on top line and price of cotton on side and the figure in square caused by their intersections is the manufacturing margin.

(Copyright by Clark Publishing Co.)

Table No. 1

Cost of Cotton	Cotton Plus Waste	Price of Yarn																
		Price of Yarn Less 5% & 2% & 2% & .65 frt.																
		31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
12	14.12	13.80	14.72	15.64	16.56	17.48	18.40	19.33	20.25	21.17	22.09	23.01	23.93	24.85	25.78	26.70	27.62	28.54
13	15.29	12.70	13.55	14.47	15.39	16.31	17.23	18.16	19.08	20.00	20.92	21.84	22.76	23.68	24.61	25.53	26.45	27.37
14	16.47	11.45	12.37	13.29	14.21	15.13	16.05	16.98	17.90	18.82	19.74	20.66	21.58	22.50	23.43	24.35	25.27	26.19
15	17.65	10.27	11.19	12.11	13.03	13.95	14.87	15.80	16.72	17.54	18.56	19.48	20.40	21.32	22.25	23.17	24.09	25.01
16	18.82	9.10	10.02	10.94	11.86	12.78	13.70	14.63	15.55	16.47	17.39	18.31	19.23	20.15	21.08	22.00	22.92	23.84
17	20.00	7.92	8.84	9.76	10.68	11.60	12.52	13.45	14.37	15.29	16.21	17.13	18.05	18.97	19.90	20.82	21.74	22.66
18	21.18	6.74	7.66	8.58	9.50	10.42	11.34	12.27	13.19	14.11	15.03	15.95	16.87	17.79	18.72	19.64	20.56	21.48
19	22.35	5.57	6.49	7.41	8.33	9.25	10.17	11.10	12.02	12.94	13.86	14.78	15.70	16.62	17.55	18.47	19.39	20.31
20	23.53	4.39	5.31	6.23	7.15	8.07	8.99	9.92	10.84	11.76	12.68	13.60	14.52	15.44	16.37	17.29	18.21	19.13
21	24.71	3.21	4.13	5.05	5.97	6.89	7.81	8.64	9.66	10.58	11.50	12.42	13.34	14.26	15.19	16.11	17.03	17.95
22	25.88	2.04	2.96	3.88	4.80	5.72	6.64	7.57	8.49	9.41	10.33	11.25	12.17	13.09	14.02	14.94	15.86	16.78
23	27.06	.86	1.78	2.70	3.63	4.54	5.46	6.39	7.31	8.23	9.15	10.07	10.99	11.91	12.84	13.76	14.68	15.60
24	28.23	.61	1.53	2.45	3.37	4.29	5.22	6.14	7.06	7.98	8.90	9.82	10.74	11.67	12.59	13.51	14.43	
25	29.41			.35	1.27	2.19	3.11	4.04	4.96	5.88	6.80	7.72	8.64	9.56	10.49	11.41	12.33	13.25
26	30.59				.09	1.01	1.93	2.86	3.78	4.70	5.62	6.54	7.46	8.38	9.31	10.23	11.15	12.07
27	31.76					.76	1.69	2.61	3.53	4.45	5.37	6.29	7.21	8.14	9.06	9.98	10.90	
28	32.94						.51	1.43	2.35	3.27	4.19	5.11	6.03	6.96	7.88	8.80	9.72	
29	34.12							.25	1.17	2.09	3.01	3.93	4.85	5.78	6.70	7.62	8.54	
30	35.29										.92	1.84	2.76	3.68	4.61	5.53	6.45	7.37
31	36.47											.66	1.58	2.50	3.43	4.35	5.27	6.19
32	37.65												.40	1.32	2.25	3.17	4.09	5.01
33	38.82													.15	1.08	2.00	2.92	3.84
34	40.00															.82	1.74	2.66
35	41.18																.56	1.48

Table No. 2

Cost of Cotton	Cotton Plus Waste	Price of Yarn																
		Price of Yarn Less 5% & 2% & 2% & .65 frt.																
		48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
16	18.82	43.15	44.06	44.97	45.88	46.79	47.70	48.61	49.53	50.45	51.36	52.27	53.18	54.09	55.00	55.92	56.83	57.74
17	20.00	24.76	25.68	26.60	27.53	28.45	29.37	30.29	31.21	32.13	33.06	33.98	34.90	35.82	36.74	37.66	38.58	39.51
18	21.18	23.58	24.50	25.42	26.35	27.27	28.19	29.11	30.03	30.95	31.88	32.80	33.72	34.64	35.56	36.48	37.40	38.33
19	22.35	22.40	23.32	24.24	25.17	26.09	27.01	27.93	28.85	29.77	30.70	31.62	32.54	33.46	34.38	35.30	36.22	37.15
20	23.53	21.23	22.15	23.07	24.00	24.92	25.84	26.76	27.68	28.60	29.53	30.45	31.37	32.29	33.21	34.13	35.05	35.98
21	24.71	20.05	20.97	21.89	22.82	23.74	24.66	25.58	26.50	27.42	28.35	29.27	30.19	31.11	32.03	32.95	33.87	34.80
22	25.88	18.87	19.79	20.71	21.64	22.56	23.48	24.40	25.32	26.24	27.17	28.09	29.01	29.93	30.85	31.77	32.69	33.62
23	27.06	17.70	18.62	19.54	20.47	21.39	22.31	23.23	24.15	25.07	26.00	26.92	27.84	28.76	29.68	30.60	31.52	32.45
24	28.23	16.52	17.44	18.36	19.29	20.21	21.13	22.05	22.97	23.89	24.82	25.74	26.66	27.58	28.50	29.42	30.34	31.27
25	29.41	15.35	16.27	17.19	18.12	19.04	19.96	20.88	21.80	22.72	23.65	24.57	25.49	26.41	27.33	28.25	29.17	30.10
26	30.59	14.17	15.09	16.01	16.94	17.86	18.78	19.70	20.62	21.54	22.47	23.39	24.31	25.23	26.15	27.07	27.99	28.92
27	31.76	12.99	13.91	14.83	15.76	16.68	17.60	18.52	19.44	20.36	21.29	22.21	23.13	24.05	24.97	25.89	26.81	27.74
28	32.94	11.82	12.74	13.66	14.59	15.51	16.43	17.35	18.27	19.19	20.12	21.04	21.96	22.88	23.80	24.72	25.64	26.57
29	34.12	10.64	11.56	12.48	13.41	14.33	15.25	16.17	17.09	18.01	18.94	19.86	20.78	21.70	22.62	23.54	24.46	25.39
30	35.29	9.46	10.38	11.30	12.23	13.15	14.07	14.99	15.81	16.83	17.76	18.68	19.60	20.52	21.44	22.36	23.28	24.21
31	36.47	8.29	9.21	10.13	11.06	11.98	12.90	13.82	14.74	15.66	16.59	17.51	18.43	19.35	20.27	21.19	22.11	23.04
32	37.65	7.11	8.03	8.95	9.88	10.80	11.72	12.64	13.56	14.48	15.41	16.33	17.25	18.17	19.09	20.01	20.93	21.86
33	38.82	5.93	6.85	7.77	8.70	9.62	10.54	11.46	12.38	13.30	14.23	15.15	16.07	16.99	17.91	18.83	19.75	20.68
34	40.00	4.76	5.68	6.60	7.53	8.45	9.37	10.29	11.21	12.13	13.06	13.98	14.90	15.82	16.74	17.66	18.58	19.51
35	41.18	3.58	4.50	5.42	6.35	7.27	8.19	9.11	10.03	10.95	11.88	12.80	13.72	14.64	15.56	16.48	17.40	18.33
36	42.35	2.40	3.32	4.24	5.17	6.09	7.01	7.93	8.85	9.77	10.70	11.62	12.54	13.46	14.38	15.30	16.22	17.15
37	43.53	1.23	2.15	3.07	4.00	4.92	5.84	6.76	7.68	8.60	9.53	10.45	11.37	12.29	13.21	14.13	15.05	15.98
38	44.71	.05	.97	1.89	2.82	3.74	4.66	5.58	6.50	7.42	8.35	9.27	10.19	11.11	12.03	12.95	13.87	14.80
39	45.88			.71	1.64	2.56	3.48	4.40	5.32	6.24	7.17	8.09	9.01	9.93	10.85	11.77	12.69	13.62
40	47.06				.47	1.39	2.31	3.23	4.15	5.07	6.00	6.92	7.84	8.76	9.68	10.60	11.52	12.45
41	48.23					.21	1.13	2.05	2.97	3.89	4.82	5.74	6.66	7.58	8.50	9.42	10.34	11.27
42	49.41						.88	1.80	2.72	3.65	4.57	5.49	6.41	7.33	8.25	9.17	10.10	
43	50.59							.62	1.54	2.47	3.39	4.31	5.23	6.15	7.07	7.99	8.92	
44	51.76								.36	1.29	2.21	3.13	4.05	4.97	5.89	6.81	7.74	
45	52.94									.12	1.04	1.96	2.88	3.80	4.72	5.64	6.57	
46	54.12										.78	1.70	2.62	3.54	4.46	5.38		
47	55.29											.52	1.44	2.36	3.28	4.21		
48	56.47													.27	1.19	2.11	3.04	
																	.93	1.86

Table No. 3

Cost of Cotton	Cotton Plus Waste	Price of Yarn Price of Yarn Less 5% & 2% & 2% & .65 frt.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
			58.65	59.57	60.48	61.39	62.31	63.22	64.13	65.04	65.95	66.86	67.77	68.69	69.61	70.52	71.43	72.34	73.25
20	23.53		55.72	56.64	57.56	58.48	59.40	60.32	61.25	62.17	63.09	64.01	64.93	65.85	66.78	67.70	68.62	69.54	70.46
21	24.71		54.54	55.46	56.38	57.30	58.22	59.14	60.07	60.99	61.91	62.83	63.75	64.67	65.59	66.52	67.44	68.36	69.28
22	25.88		53.37	54.29	55.21	56.13	57.05	57.97	58.90	59.82	60.74	61.66	62.58	63.50	64.43	65.35	66.27	67.19	68.11
23	27.06		52.19	53.11	54.03	54.95	55.87	56.79	57.72	58.64	59.56	60.48	61.40	62.32	63.25	64.17	65.09	66.01	66.93
24	28.23		51.02	51.94	52.86	53.78	54.70	55.62	56.55	57.47	58.39	59.31	60.23	61.15	62.08	63.00	63.92	64.84	65.76
25	29.41		49.84	50.76	51.68	52.60	53.52	54.44	55.37	56.29	57.21	58.13	59.05	59.97	60.90	61.82	62.74	63.66	64.58
26	30.59		48.66	49.58	50.50	51.42	52.34	53.26	54.19	55.11	56.03	56.95	57.87	58.79	59.72	60.64	61.56	62.48	63.40
27	31.76		47.49	48.41	49.33	50.25	51.17	52.09	53.02	53.94	54.86	55.78	56.70	57.62	58.55	59.47	60.39	61.31	62.23
28	32.94		46.31	47.23	48.15	49.07	49.99	50.91	51.84	52.76	53.68	54.60	55.52	56.44	57.37	58.29	59.21	60.13	61.05
29	34.12		45.13	46.05	46.97	47.89	48.81	49.73	50.66	51.58	52.50	53.42	54.34	55.26	56.19	57.11	58.03	58.95	59.87
30	35.29		43.96	44.88	45.80	46.72	47.64	48.56	49.49	50.41	51.33	52.25	53.17	54.09	55.02	55.94	56.86	57.78	58.70
31	36.47		42.78	43.70	44.62	45.54	46.46	47.38	48.31	49.23	50.15	51.07	51.99	52.91	53.84	54.76	55.68	56.60	57.52
32	37.65		41.60	42.52	43.44	44.36	45.28	46.20	47.13	48.05	48.97	49.89	50.81	51.73	52.66	53.58	54.50	55.42	56.34
33	38.82		40.43	41.35	42.27	43.19	44.11	45.03	45.96	46.88	47.80	48.72	49.64	50.56	51.49	52.41	53.33	54.25	55.17
34	40.00		39.26	40.17	41.09	42.01	42.93	43.85	44.78	45.70	46.62	47.54	48.46	49.38	50.31	51.23	52.15	53.07	53.99
35	41.18		38.07	38.99	39.91	40.83	41.75	42.67	43.60	44.52	45.44	46.36	47.28	48.20	49.13	50.05	50.97	51.89	52.81
36	42.35		36.90	37.82	38.74	39.66	40.58	41.50	42.43	43.35	44.27	45.19	46.11	47.03	47.96	48.88	49.80	50.72	51.64
37	43.53		35.72	36.64	37.56	38.48	39.40	40.32	41.25	42.17	43.09	44.01	44.93	45.85	46.78	47.70	48.62	49.54	50.46
38	44.71		34.54	35.46	36.38	37.30	38.22	39.14	40.07	40.99	41.91	42.83	43.75	44.67	45.59	46.52	47.44	48.36	49.28
39	45.88		33.37	34.29	35.21	36.13	37.05	37.97	38.90	39.82	40.74	41.66	42.58	43.50	44.43	45.35	46.27	47.19	48.11
40	47.06		32.19	33.11	34.03	34.95	35.87	36.79	37.72	38.64	39.56	40.48	41.40	42.32	43.25	44.17	45.09	46.01	46.93
41	48.23		31.02	31.94	32.86	33.78	34.70	35.62	36.55	37.47	38.39	39.31	40.23	41.15	42.08	43.00	43.92	44.84	45.76
42	49.41		29.84	30.76	31.68	32.60	33.52	34.44	35.37	36.29	37.21	38.13	39.05	39.97	40.90	41.82	42.74	43.66	44.58
43	50.59		28.66	29.58	30.50	31.42	32.34	33.26	34.19	35.11	36.03	36.95	37.87	38.79	39.72	40.64	41.56	42.48	43.40
44	51.76		27.49	28.41	29.33	30.25	31.17	32.09	33.02	33.94	34.86	35.78	36.70	37.62	38.55	39.47	40.39	41.31	42.23
45	52.94		26.31	27.23	28.15	29.07	29.99	30.91	31.84	32.76	33.68	34.60	35.52	36.44	37.37	38.29	39.21	40.13	41.05
46	54.12		25.13	26.05	26.97	27.89	28.81	29.73	30.66	31.58	32.50	33.42	34.34	35.26	36.19	37.11	38.03	38.95	39.87
47	55.29		23.96	24.88	25.80	26.72	27.64	28.56	29.49	30.41	31.33	32.25	33.17	34.09	35.02	35.94	36.86	37.78	38.70
48	56.47		22.78	23.70	24.62	25.54	26.46	27.38	28.31	29.23	30.15	31.07	31.99	32.91	33.84	34.76	35.68	36.60	37.52
49	57.65		21.60	22.52	23.44	24.36	25.28	26.20	27.13	28.05	28.97	29.89	30.81	31.73	32.66	33.58	34.50	35.42	36.34
50	58.82		20.43	21.35	22.27	23.19	24.11	25.03	25.96	26.88	27.80	28.72	29.64	30.56	31.49	32.41	33.33	34.25	35.17
51			19.26	20.17	21.09	22.01	22.93	23.85	24.78	25.70	26.62	27.54	28.46	29.38	30.31	31.23	32.15	33.07	33.99
52			18.07	18.99	19.91	20.83	21.75	22.67	23.60	24.52	25.44	26.36	27.28	28.20	29.13	30.05	30.97	31.89	32.81
53			16.90	17.82	18.74	19.66	20.58	21.50	22.43	23.35	24.27	25.19	26.11	27.03	27.96	28.88	29.80	30.72	31.64
54			15.72	16.64	17.56	18.48	19.40	20.32	21.25	22.17	23.09	24.01	24.93	25.85	26.78	27.70	28.62	29.54	30.46
55			14.54	15.46	16.38	17.30	18.22	19.14	20.07	20.99	21.91	22.83	23.75	24.67	25.59	26.52	27.44	28.36	29.28
56			13.37	14.29	15.21	16.13	17.05	17.97	18.90	19.82	20.74	21.66	22.58	23.50	24.43	25.35	26.27	27.19	28.11
57			12.19	13.11	14.03	14.95	15.87	16.79	17.72	18.64	19.56	20.48	21.40	22.32	23.25	24.17	25.09	26.01	26.93
58			11.02	11.94	12.86	13.78	14.70	15.62	16.55	17.47	18.39	19.31	20.23	21.15	22.08	23.00	23.92	24.84	25.76
59			9.84	10.76	11.68	12.60	13.52	14.44	15.37	16.29	17.21	18.13	19.05	19.97	20.90	21.82	22.74	23.66	24.58
60			8.66	9.58	10.50	11.42	12.34	13.26	14.19	15.11	16.03	16.95	17.87	18.79	19.72	20.64	21.56	22.48	23.40
61			7.49	8.41	9.33	10.25	11.17	12.09	13.02	13.94	14.86	15.78	16.70	17.62	18.55	19.47	20.39	21.31	22.23
62			6.31	7.23	8.15	9.07	9.99	10.91	11.84	12.76	13.68	14.60	15.52	16.44	17.37	18.29	19.21	20.13	21.05
63			5.13	6.05	6.97	7.89	8.81	9.73	10.66	11.58	12.50	13.42	14.34	15.26	16.19	17.11	18.03	18.95	19.87
64			3.96	4.88	5.80	6.72	7.64	8.56	9.49	10.41	11.33	12.25	13.17	14.09	15.02	15.94	16.86	17.78	18.70
65			2.78	3.70	4.62	5.54	6.46	7.38	8.31	9.23	10.15	11.07	11.99	12.91	13.84	14.76	15.68	16.60	17.52
66			1.60	2.52	3.44	4.36	5.28	6.21	7.13	8.05	8.97	9.89	10.81	11.73	12.66	13.58	14.50	15.42	16.34
67			.43	1.35	2.27	3.19	4.11	5.03	5.96	6.88	7.80	8.72	9.64	10.56	11.49	12.41	13.33	14.25	15.17

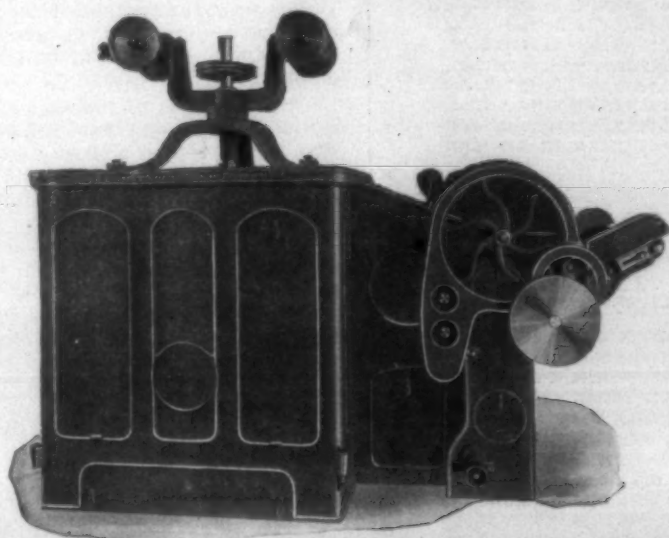
Table No. 4

Cost of Cotton	Cotton Plus Waste	Price of Yarn																	
		Price of Yarn Less 5% & 2% & 2% & .65 frt.																	
		82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	
23	27.06	74.16	75.07	75.99	76.90	77.82	78.73	79.64	80.55	81.46	82.38	83.29	84.20	85.11	86.03	86.94	87.85	88.77	
24	28.23	47.85	48.77	49.70	50.62	51.54	52.46	53.38	54.30	55.22	56.15	57.07	57.99	58.91	59.83	60.75	61.68	62.60	
25	29.41	46.68	47.60	48.53	49.45	50.37	51.29	52.21	53.13	54.05	54.98	55.90	56.82	57.74	58.66	59.58	60.51	61.43	
26	30.59	45.50	46.42	47.35	48.27	49.19	50.11	51.03	51.95	52.87	53.80	54.72	55.64	56.56	57.48	58.40	59.33	60.25	
27	31.76	44.32	45.24	46.17	47.09	48.01	48.93	49.85	50.77	51.69	52.62	53.54	54.46	55.38	56.30	57.22	58.15	59.07	
28	32.94	43.15	44.07	45.00	45.92	46.84	47.76	48.68	49.60	50.52	51.45	52.37	53.29	54.21	55.13	56.05	56.98	57.90	
29	34.12	41.97	42.89	43.82	44.74	45.66	46.58	47.50	48.42	49.34	50.27	51.19	52.11	53.03	53.95	54.87	55.80	56.72	
30	35.29	40.79	41.71	42.64	43.56	44.48	45.40	46.32	47.24	48.16	49.09	50.01	50.93	51.85	52.77	53.69	54.62	55.54	
31	36.47	39.62	40.54	41.47	42.39	43.31	44.23	45.15	46.07	46.99	47.92	48.84	49.76	50.68	51.60	52.52	53.45	54.37	
32	37.65	38.44	39.36	40.29	41.21	42.13	43.05	43.97	44.89	45.81	46.74	47.66	48.58	49.50	50.42	51.34	52.27	53.19	
33	38.82	37.26	38.18	39.11	40.03	40.95	41.87	42.79	43.71	44.63	45.56	46.48	47.40	48.32	49.24	50.16	51.09	52.01	
34	40.00	36.09	37.01	37.94	38.86	39.78	40.70	41.62	42.54	43.46	44.39	45.31	46.23	47.15	48.07	48.99	49.92	50.84	
35	41.18	34.91	35.83	36.76	37.68	38.60	39.52	40.44	41.36	42.28	43.21	44.13	45.05	45.97	46.89	47.81	48.74	49.66	
36	42.35	33.73	34.65	35.58	36.50	37.42	38.34	39.26	40.18	41.10	42.02	42.95	43.87	44.79	45.71	46.63	47.56	48.48	
37	43.53	32.56	33.53	34.41	35.33	36.25	37.17	38.09	39.01	39.93	40.86	41.78	42.70	43.62	44.54	45.46	46.39	47.31	
38	44.71	31.38	32.30	33.23	34.15	35.07	35.99	36.91	37.83	38.75	39.68	40.60	41.52	42.44	43.36	44.28	45.21	46.13	
39	45.88	30.20	31.12	32.05	32.97	33.89	34.81	35.73	36.65	37.57	38.50	39.42	40.34	41.26	42.18	43.10	44.03	44.95	
40	47.06	29.03	29.95	30.88	31.80	32.72	33.64	34.56	35.48	36.40	37.33	38.25	39.17	40.09	41.01	41.93	42.86	43.78	
41	48.23	27.85	28.77	29.70	30.62	31.54	32.46	33.38	34.30	35.22	36.15	37.07	37.99	38.91	39.83	40.75	41.68	42.60	
42	49.41	26.68	27.60	28.53	29.45	30.37	31.29	32.21	33.13	34.05	34.98	35.90	36.82	37.74	38.66	39.58	40.51	41.43	
43	50.59	25.50	26.42	27.35	28.27	29.19	30.11	31.03	31.95	32.87	33.80	34.72	35.64	36.56	37.48	38.40	39.33	40.25	
44	51.76	24.32	25.24	26.17	27.09	28.01	28.93	29.85	30.77	31.69	32.62	33.54	34.46	35.38	36.30	37.22	38.15	39.07	
45	52.94	23.15	24.07	25.00	25.92	26.84	27.76	28.68	29.60	30.52	31.45	32.37	33.29	34.21	35.13	36.05	36.98	37.90	
46	54.12	21.97	22.89	23.82	24.74	25.66	26.58	27.50	28.42	29.34	30.27	31.19	32.11	33.03	33.95	34.87	35.80	36.72	
47	55.29	20.79	21.71	22.64	23.56	24.48	25.40	26.32	27.24	28.16	29.09	30.01	30.93	31.85	32.77	33.69	34.62	35.54	
48	56.47	19.62	20.54	21.47	22.39	23.31	24.23	25.15	26.07	26.99	27.92	28.84	29.76	30.68	31.60	32.52	33.45	34.37	
49	57.65	18.44	19.36	20.29	21.21	22.13	23.05	23.97	24.89	25.81	26.74	27.66	28.58	29.50	30.42	31.34	32.27	33.19	
50	58.82	17.26	18.18	19.11	20.03	20.95	21.87	22.79	23.71	24.63	25.56	26.48	27.40	28.32	29.24	30.16	31.09	32.01	
51	59.99	16.09	17.01	17.94	18.86	19.78	20.70	21.62	22.54	23.46	24.39	25.31	26.23	27.15	28.07	28.99	29.92	30.84	

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Studying the Job

(Continued from Page 16)

sheet. The job may depend upon several factors, such as quality of raw product or finished product; machinery; equipment; storage space around machines; or any one or combination of many more which may be given. A study of these factors gets right at the foundation of production, and is the reason why such effective results can be brought about through this procedure. The employee has little or no control over these factors, and when he realizes what you are getting at, and that the company is going to assume its responsibility you will find that you will get his whole-hearted co-operation. Instead of getting his opposition, and his using all his ingenuity in proving to you that he cannot possibly give you any greater production, you get the benefit of the practical viewpoint of the man who is actually doing the work.

This gives you still another big advantage, for you then get the workman's ideas, some based on tradition, some on personal experiences, which may or may not have prejudiced him to do certain things, etc. Then after you have made your study and proved out that certain changes materially affect the balance sheet, you can win over the workman readily by explaining things to him in the way he sees it. In this way you will get the respect of the workman, because you have assisted him in overcoming certain obstacles, which makes his work easier, and he will then be only too glad to put his shoulder to the wheel and make things go.

Production Increased 200 Per Cent.

One of our progressive New England friends, Mr. Henry S. Dennison, of the Dennison Manufacturing Company, Framingham, Mass., recently said before a gathering of business men, that studying the job of their various activities had given them an increase in productivity, with the same number of employees, over a period of a few years, of some 200 per cent. It was his opinion that not more than 25 per cent of this gain was from factors that were due to employees formerly wasting time and effort. The balance was due to the elimination of delays that were outside of the employees' control—a definite responsibility of management. The employees were not working harder, but to better advantage, and steadily instead of intermittently.

The second step of making a measurement of the performance of the job is the "yard stick" to be applied in measuring the value of each of the factors investigated in step one, the analysis. You can readily realize, perhaps, how a measuring stick can be applied to quantity turned out, but you may ask, for instance, how a yard stick can be applied in measuring quality, which is a very intangible factor in some ways. For instance, in the ivory button industry, several years ago, one of the largest manufacturers of buttons, who had established a reputation for turning out the finest quality, was faced with the situation that although their actual labor costs were lower than any of

their competitors', due to having studied every job and having developed automatic machines for most of the very costly operations, still their rejections by the inspection department on account of quality they insisted on was so large that it more than wiped out all other earnings.

Salesmen Were Too Smart.

In previous years they had instructed their salesmen intensively on all the factors of any kind, even on the back of the button, etc., etc., such as smoothness of surface, sharp edges on rims, no blemishes—so that the quality of their product surpassed that of all their competitors. They instructed them how to bring out the defects of the other man's product by holding the button to the light in a certain way, and then taking a soft lead pencil and marking the surface, which would accentuate the very faintest surface irregularity. This was possibly good sales dope in past years, but under present conditions it was their undoing, for the customer kept on demanding of them a product superior to what any competitor sold, yet the price had to meet the other fellow's, whose product was just as good for all practical purposes.

In this case the yard stick of surface smoothness for quality measurement was not a proper instrument. Shade of coloring or the design on the button attracted the customer more than any slight difference in smoothness. The yard stick in each case, then, is something that depends upon judgment, and varies with business conditions, much like supply and demand, etc. It is for this very reason that the quality measure on each case should be set up to correspond to the trade requirements at that particular time, and changed as conditions change.

It was through studying the job that this condition was brought forcibly to the light. A yard stick as developed to measure the quality of goods acceptable to the trade, which meant in the case of the button company, at the time the writer was advising them, the difference between passing as A-1 quality only 50 per cent of the total output or passing practically 90 per cent of the total output. This changed the complexion of the balance sheet from red figures to black figures that were worth having.

Measuring Quality.

The yard stick for measuring other factors, such as saving in waste of materials, can be made more readily than the one for quality. In some of these cases the yard stick can only be accurately determined after a great many tests have been performed to determine the underlying fundamental laws controlling the material at hand. In a counter company, for example, manufacturing leather inner soles, counters and tips for shoes, we were given to understand when we were ready to study the job of cutting cow belly strips that "every animal's anatomy was different," and therefore his hide was different in shape, slaughter cuts, burr marks, etc., from every other animal's.

(Continued on Page 34)

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Business Manager

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Sales At No Profit

THE volume of cotton goods sales during the past three weeks has rarely been exceeded but with few exceptions sales have been made with a very narrow margin of profit.

The buyers have had control of the market so long that it is difficult to obtain reasonable profits, but as the mills get business on their books a gradual widening of the margin of profit is to be expected.

One thing that can be counted upon to help advance prices of cotton goods is the present high prices of wool and silk which will cause the substitution of cotton goods.

The revival of the cotton goods business is not only in the United States but is noted in almost every section of the world.

Carders' Meeting

THE meeting of the Carders' Division of the Southern Textile Association at Greenwood, S. C., on December 12th promises to be exceedingly well attended.

Those who have attended previous Division Meetings will make every effort to attend this one because they have realized the great benefits to be derived from the discussions.

The old idea which is still prevalent in New England to some extent was to keep everything to yourself, but the new idea is to give your neighbor the benefits of your experience and to benefit from the experience of your neighbor.

We have often said that the Division Meetings of the Southern Textile Association are going to make the South the greatest cotton manufacturing center in the world because they are developing the young men in the industry and teaching them to study cotton manufacturing problems.

There will be a morning session in Greenwood at 10 a. m., a lunch at

12:30 o'clock and an afternoon session from 2:00 until 4 p. m.

J. O. Corn, of Columbia, S. C., chairman of the Carders' Division, will preside over the meeting.

Miss Abbott To The Rescue

MISS GRACE ABBOTT, Chief of the Children's Bureau of the Department of Labor and the prospective chief beneficiary in case the Federal Child Labor Amendment is ratified, has kept out of the fight as long as she could.

Realizing that the amendment which would give her a large increase in salary and immense patronage is facing almost certain defeat, Miss Abbott has not only entered the fray but has sent her assistants to California and other States.

Thus we have spectacle of Government employees with salaries and expenses paid by the people of this country working for a measure that will benefit them personally.

Federal salaries should not be paid for such purposes.

Big Editors Shifting

WHILE in New York last week we sought and secured an interview with the editor-in-chief of one of the great papers of this country, one that has persistently advocated the so-called Child Labor Amendment.

We called his attention to the fact that he had often stated that New England mills were handicapped by the employment of child labor in the South and we laid before him the statistics showing that less than 21 children under 14 were employed in all the cotton mills of the South.

The editor said "Maybe you employ more children," but we presented the statistics showing more employed in New England.

He then said "Maybe your laws are not enforced," but we called his

attention to the fact that no one had dared make such an accusation.

It was very evident that the editor of that great paper had reached the point that he realized to some extent the deception that had been practiced upon him by the advocates of the amendment.

Before we left he asked us to write him a letter giving the facts so that he could study them.

It is our opinion that many of the editors of the country are beginning to realize that they have been deceived.

Some More Liars To Be Trained

WE assume from the following extract from the Providence Tribune that those who advocate the mis-called Child Labor Amendment have to be coached and trained in making false and deceptive statements:

"The child welfare committee of the United League of Women Voters held a meeting yesterday at headquarters to organize a class for the training of speakers on the Child Labor Amendment."

What Next?

THE following is an extract from a report of the recent meeting of the New York State League of Women Voters:

"There is likely to be a lively tilt over the question of birth control, as a strong minority is determined to bring it before convention while the majority are convinced that it is unwise to inject this subject into a political organization. A letter was sent out by Mrs. Caspar Whitney, first vice-president, to 90 district leaders, asking for an expression of opinion as to the advisability to including birth control in this year's program."

This is the organization that is seeking to centralize the powers of State labor departments in a Washington Bureau.

It has been said that they seek through legislation to control the people of this country from the cradle to the grave and beyond in both directions.

They are already on record for laws requiring every expectant mother to be placed under the control of Government agents, most of whom are old maids.

Now they, including the old maids, are seeking to go one step further and are making "birth control" legislation one of their aspirations.

What next?

Strong Language But True.

The fundamental theory of this Child Labor Amendment is that we people of Maine are such a damned sight better than the people of North Carolina that we are called of the Lord to go get the Federal club and go down and smash North Carolina into our high state of Christian consecration.—Lewiston (Me.) Daily Sun.

The Congressional Mother Amendment.

Very soon the socialists will have a Federal employee attending the mother and child at birth, care for the child through the adolescence period, give it a life time job, provide a Federal funeral with honor and last but not least a pension in perpetuity.

Ratification of the proposed amendment would permit a woman having no experience with children located in the Children's Bureau to lay down rules and regulations for husky young farm children making it a crime to take part in the lighter chores, and in the harvest at times when it is impossible to get any other help.—Oscar E. Bradfute, President American Farm Bureau Federation.

Legion Abandons Child Labor Amendment.

The American Legion executive committee, Department of New Hampshire, has voted to abandon its program in the interests of the Federal Child Labor Amendment.

"At the department executive committee meeting it was voted following a discussion of some length, not to urge the passage of the Child Labor Amendment before the coming session of the Legislature. Not being sure as to the effect the amendment might have directly or indirectly, the 'hands off' policy was adopted."

Massachusetts Preferred To Take No Chances.

The Massachusetts voters obviously desire to take no chances on having a busy-body Congress, aided and abetted by a domineering bureaucracy, say whether or not a girl or boy of sixteen shall ready a frothy novel in the porch swing or loaf at the corner while mother washes the dishes or father cuts the grass.—Buffalo (N. Y.) Express.

A Rebuke to Congress.

The rebuke now being administered to Congress for having the check to ask for such unheard-of power will bring home to the mind of the most casual statesmen that the American people still desire to be governed in all their intimate family matters by their responsible State Governments rather than by a distant Federal Congress not amenable to local public opinion.—George Stewart Brown in New York Times.

More Interested in Politics Than in Child Welfare.

The wish to protect young children from exploitation is so humane and so commendable that it cannot easily be outweighed by defects in this particular measure now pending, but if the amendment is defeated those who wrote it and who go so far beyond facts in defending it may properly be charged with the responsibility. They have apparently been more interested in politics than in child welfare.—Buffalo (N. Y.) Express.

Personal News

E. H. Steere has succeeded J. M. Sams as superintendent of the Asheboro Knitting Mills, Asheboro, N. C.

S. F. Fowler has become superintendent of the Asheville Knitting Mills, Asheville, N. C.

John F. Jones has resigned as superintendent of the United Mills Company, Mortimer, N. C.

J. R. Moore has succeeded N. B. McCanless as manager of the Halifax Cotton Mills, Mt. Pleasant, N. C.

W. E. McKinney has accepted position with the Banning (Ga.) Mills.

F. E. Thompson has been appointed overseer of cloth room at Toccoa (Ga.) Mills.

Fred L. Mason has resigned as spinning overseer at the Aragon (Ga.) Mills.

G. W. Chapman has resigned as superintendent of the Woodstock Mills, Anniston, Ala.

Edward L. Swords has been appointed overseer spinning at the Waxahachie (Tex.) Cotton Mills.

Malcolm D. Link has been appointed overseer carding at the Worth Cotton Mills, Fort Worth, Tex.

L. R. Brumby, assistant superintendent of the Porterdale (Ga.) Mills, has been promoted to superintendent.

Floyd Stewart has been appointed spinning overseer at the Cedartown Cotton and Export Company Mills, Cedartown, Ga.

J. O. Porter has been transferred from position as superintendent Bibb Mills, Columbus, to agent of the Bibb Mills, at Porterdale, Ga.

R. W. Harris has succeeded G. T. Roth as superintendent of the Chat-ham Manufacturing Company, Winston-Salem, N. C.

W. A. Woodruff has been transferred from superintendent Bibb Mills, Porterdale, Ga., to superintendent Bibb Mills, Columbus, Ga.

James B. Knight has resigned as overseer spinning at the Lane Mills, New Orleans, La., and accepted position as night overseer spinning at the Exposition Mills, Atlanta, Ga.

D. W. Knight is now superintendent of the Rocky Mount Mills, Rocky Mount, N. C.

A. H. Vann has succeeded the late S. C. Vann as president of the Sterling Cotton Mills, Franklinton, N. C.

J. O. Brown is now superintendent of the Greenville Cotton Mills, Greenville, N. C.

E. O. Becknell has succeeded R. A. Holmes as superintendent of the Minette Mills, Grover, N. C.

Edward Schenck has become superintendent of the Wallace-Wilson Hosiery Company, Salisbury, N. C.

L. L. Okey has been appointed superintendent of the Charlotte Knitting Company, Charlotte, N. C.

J. L. Potts is now superintendent of the Renfrew Manufacturing Company, Concord, N. C.

B. M. Spratt, Jr., has succeeded J. L. Schrum as secretary and treasurer of the Blue Ridge Cotton Mills, Connelly Springs, N. C.

S. B. Eskridge is now superintendent of the Double Shoals Manufacturing Company, Double Shoals, N. C.

J. H. Milliken has succeeded W. A. Boland as superintendent of the Love Knitting Company, Burlington, N. C.

T. B. Connolly has succeeded Dewey Watt as superintendent of the Watts Spinning Company, Stony Point, N. C.

Earle H. Brown, of Concord, N. C., will be treasurer and local manager of the Carolina Textile Corporation, which takes over the two plants of the Dillon Mills, at Dillon and Hammer, S. C.

F. L. Robbins has accepted the position of general superintendent of the Carolina Textile Corporation, which takes over the two plants of the Dillon Mills, at Dillon and Hammer, S. C.

Position Open

Wanted—First-class card grinder for 39 Mason cards. Good wages to right man. Communicate with H. L. Gobbel, Supt., Glencoe Cotton Mills, Columbia, S. C.

Cocker Machine and Foundry Company Gastonia, N. C.

BUILDERS OF TEXTILE MACHINERY

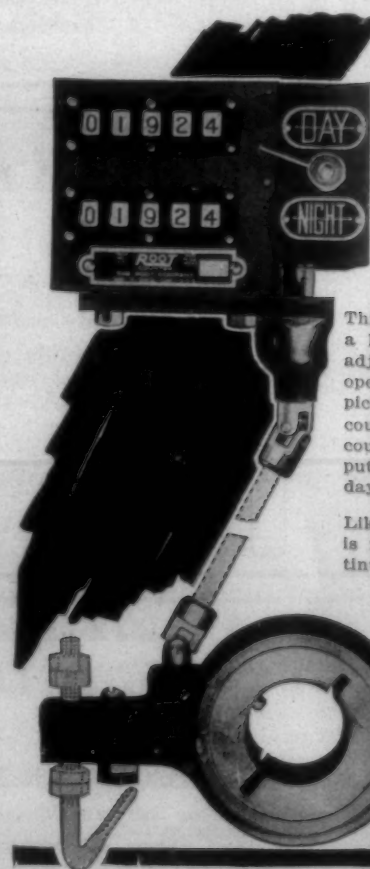
Linking Warpers, Linkers, Balling Warpers, Balling Attachments, Section Beam Warpers, Long Chain Beamers, Short Chain Beamers, Warp Splitting Machines, Warp Dyeing Machines, Warp Doublers and Splitters, Warp Collers, Boiling Out Boxes and Warp Washing Machines, Dye House Ballers.

Bobbins and Spools

Particular attention given to
**All Types Of Warp
Bobbins For Filling Wind**
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Double
Shift

ROOT
TWIN
PICK COUNTER

This new development has taken like a hot cake in the textile field. The adjusting of the lever by the relieving operator automatically records the picks of his labor on his side of the counter, it saves the cost of an extra counter and also eliminates any dispute between the operators of the day and night shifts.

Like the single Root Pick counter it is made to stand vibration and continual operations.

Let us tell you about it.

The Root Co.
BRISTOL, CONN.
Southern Office:
W. A. Kennedy
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MILL NEWS ITEMS OF INTEREST

Rutherfordton, N. C.—Almost all of the mills in Rutherford county are again operating on full time.

Shelby, N. C.—Cotton mills here and in nearby towns are now operating on full time.

Laurinburg, N. C.—The Scotland, Prince, Waverly and Dickson Mills have all returned to full time operation.

Dillon, S. C.—It is understood that the Carolina Textile Corporation, which takes over the Dillon and Hamer Mills, will install looms for the manufacture of tire fabrics.

Statesville, N. C.—The Statesville Cotton Mills and the Paola Mills are now running on full time. The Bloomfield Manufacturing Company is temporarily idle.

Paducah, Ky.—The Claussner Hosiery Mills will install a considerable amount of new machinery.

Muskogee, Okla.—Business men of this city are interested in organizing a company to build a cotton mill. The matter is being handled through the Chamber of Commerce.

Gastonia, N. C.—A survey of mill operations in Gaston county shows that practically all of the mills are running on full day schedules and many of them are running at night.

Greenville, S. C.—The Vardry Mill will increase capital stock from \$140,000 to \$275,000. The increased capital is for the extension and improvement of the mill. Among the improvements will be the installation of 100 looms. The mill now has 4,320 spindles making 30s yarns. Clifton Corley is president.

Graniteville, S. C.—At a meeting of the directors of the Graniteville Manufacturing Company, Lanier Banson was elected president to succeed Leavelle McCampbell, who retires to become chairman of the board.

Brevard, N. C.—The W. S. Gray Cotton Mills, of this place, are being reorganized and in the future will be known as the Pisgah Cotton Mills. H. E. Erwin, former superintendent of the Green River Manufacturing Company, Tuxedo, N. C., will be superintendent and local manager. The names of the other officials are not known at this time.

Houston, Tex.—It is expected that the new Houston Textile Mills will begin operations in December. The plant will have 4,000 spindles and 100 looms and will make cotton blankets. Parker Tuck will be superintendent. The mill was built under the supervision of J. E. Sirrine & Co., engineers, Greenville, S. C.

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COMMISSION MERCHANTS



100 WORTH STREET
NEW YORK



DARY TRAVELERS



If it's a DARY Ring Traveler, you can depend on it that the high quality is guaranteed—that the weight and circle is always correct, and that all are uniformly tempered which insures even running, spinning or twisting.

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CHAS. L. ASHLEY

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J. T. AUST, Secretary and Assistant Treasurer

JOAB MULVANE, Vice-President and Treasurer

CHICKASHA COTTON OIL COMPANY

Capital Stock \$1,350,000.00

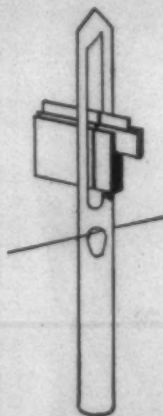
COTTON DEPARTMENT

W. M. RATTAN, Manager

Domestic

Chickasha—Oklahoma

Code: Shepperson '78



K-A Electrical Warp Stop For Looms

is backed by twenty years of experience and steady growth. It is adopted by representative mills weaving cotton, silk, worsted and woolsens.

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and Cemeteries
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Complete Topographic Surveys
General Designs, Planting, Grading
and Detail Plans
Supervision of Landscape and
Engineering Construction
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Largest Landscape Organization in the South

Chester, S. C.—The Baldwin Mills, which have been operating full time on the day run, have commenced night operations.

Jonesboro, Ark.—The Jonesboro Cotton Mills, which were organized here some time ago, expect to begin construction of their mill about the first of the year. The present plans call for an equipment of 10,000 spindles and 300 looms for making sheeting. H. J. Bosler is president.

Spartanburg, S. C.—The Spartanburg County Mills, a yarn spinning plant at Camp Wadsworth, which has been closed for more than two years and which is now in the hands of receivers pending final sale or liquidation, has been put in operation and will continue to run until the stock on hand is made into yarn. B. E. Fiske, of the Fiske-Carter Construction Company, and George A. Norwood, of the Norwood National Bank in Greenville, are the receivers.

Goldville, S. C.—Good progress is being made in the work of remodeling and enlarging the Joanna Mills, formerly the Banna Manufacturing Company. The present building will be enlarged to 100x700 feet, half of which will have two floors. New equipment will consist of 11,000 spindles and 350 looms, for making shade cloth up to 60 inches wide.

Fifty new houses will be built in the village and a modern sewage disposal system installed. A deep well is being drilled and a 750,000-gallon water tower will be erected. A large community house will also be built and an athletic field and swimming pool. Lockwood, Greene & Co. are the engineers.

N. C. Association Meets This Week

Hunter Marshall, Jr., the secretary-treasurer, has announced the program for the winter meeting of the Cotton Manufacturers Association of North Carolina to be held at the Carolina Hotel, Pinehurst, Friday and Saturday of this week.

The initial event will be the golf tournament Friday afternoon, the Carolina Hotel to give prizes. The banquet will be tendered at 8 o'clock that night. E. C. Dwelle, of Charlotte, president of the organization, will preside and Dr. William Henry Frazer, president of Queens College, Charlotte, will make an address. The program committee is arranging vaudeville stunts. An orchestra will provide music.

The business session will begin Saturday morning at 10:30 o'clock with President Dwelle in the chair. Reports will be presented by the secretary-treasurer, standing committees, the committee on resolutions, special committees, and Geo. W. Forrester, of Atlantic, traffic manager of the association. The Carolina mill rules will be discussed.

ed, unfinished business will be disposed of and adjournment taken.

The Carolina Hotel management has arranged entertainment for the women attending the convention. A bridge party will be given Saturday morning at 11 o'clock.

Senator Started as Mill Boy

Spartanburg, S. C.—The opportunities that await young men who work in cotton mills are shown to advantage in the record of achievement of Senator W. Simpson Rogers, of Spartanburg, S. C., who at the age of 35 is the most influential representative this county has ever had in the upper law-making body of South Carolina. Senator Rogers was brought up in the cotton mills. When he was a spinner he was the best, when he went to weaving he led the weave looms in which he worked. Cotton mills and cotton mill operatives profit more today by his representation of the county in the General Assembly than by any other Spartanburg has ever sent to the legislative halls, it is generally declared. Good roads, schools and equitable taxation are features of the Senator's work.

Born on a farm, placed in a cotton mill at the age of 12 and denied the opportunity for an education, he yet has attained a position of influence and a degree of personal prosperity, while still a relatively young man.

In 1912, he became a candidate for the Lower House. After his election he continued to work in the mill for a short time, but later started clerking in his brother's grocery store on North Liberty street in Spartanburg.

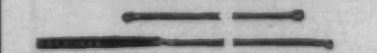
Personal

James Moore, husband of Bessie Moore, formerly of Denison, Texas, will learn something of interest to him by communicating with J. B. Cleary, Attorney-at-Law, Denison, Texas.

Improved Dobby Chain



Dobby Cords



Rice Dobby Chain Co.
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LOOM STRAPPING

Check Straps--

Lugs,

folded and stitched, cemented—

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We specialize and know your looms.

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SOUTHERN DISTRIBUTING COMPANY

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Manufacturers and Distributors

—of—
Stauss Rectified Tallow, Oil and Gums for all warp sizing and finishing purposes

SHEETING AND DRILLS WANTED IN QUANTITY

36" 40x40—6.15 36" 48x48—4.00
36" 48x48—5.50 40" 56x60—3.60

Also 56"—60" Drills and Sheetings

Manufacturers' Selling Agents, Distributors and Commission Merchants
Correspondence Solicited

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GREIST

LOOM
DROP WIRES

All we ask is the opportunity to quote you—send sample of wire with request for quotation—we will submit samples of our product—prompt deliveries and unlimited capacity for large orders—small requirements receive the same attention.

THE GREIST MFG. CO., Dept. R, New Haven, Conn.

Southern Representative:

James McCabe, P. O. Box 219, Greenville, S. C.

He was re-elected to the House in 1914, and in 1916, upon the failure of Senator Howard B. Carlisle to offer for re-election he announced his candidacy for the office. After a hard campaign against one of the prominent attorneys of the city, he received the nomination, and as a result was elected in the November elections.

Cloth Imports

Washington. — Imports of cotton cloth into this country last month, totalling 13,214,408 square yards, were the largest entered for any one month since March of this year, according to the classified tabulations of the Department of Commerce.

This total compares with 11,117,145 square yards imported during September.

Nearly all of the indicated increase is reflected in the class of goods classified under the heading of poplins and broadcloths. The total of these goods imported during October came to 9,256,403 square yards, which is the largest of any other month this year, and an increase of 2,329,403 square yards as compared with September.

Imports of satens totalled 1,930,032 square yards; lawns, organdies, nainsooks, cambrics and similar fine goods, 821,669 square yards; voiles, 632,321 square yards; crepes, 415,206 square yards; the balance included ratines, dotted Swisses, gingham and Jacquard-woven cloths.

\$100,000 INVOLVED IN SUBURBAN LAND SALE

Seventy-five Acres of J. Van Lindley Estate Purchased by First Realty and Loan Company

Over \$100,000 was involved in the sale yesterday of 75 acres of the J. Van Lindley estate, located on the Winston-Salem road just north of the Masonic home, to the First Realty and Loan Company.

This tract of land has a frontage of about 1,700 feet on the Greensboro-Winston-Salem highway. The First Realty and Loan Company is planning to develop it into residential property. The sale was negotiated by T. V. Carter.

The land described above is planted in choice varieties of flowering shrubs, trees, etc., and a clearance price will be made on them to Textile plants or others interested, that can use a quantity. Write for full particulars.

J. Van Lindley Nursery Co.
Pomona, N. C.

THE CHOICE OF A HUMIDIFYING SYSTEM

must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED.

Our COMINS SECTIONAL HUMIDIFIERS

Our FAN TYPE and HIGH DUTY HUMIDIFIERS

Our VENTILATING Type of Humidifier (Taking fresh air into the room from outside)

Our ATOMIZERS or COMPRESSED AIR SYSTEM

Our COMPRESSED AIR CLEANING SYSTEM

Our SIMPLEX HUMIDIFIER—One Pipe—No Pressure Pipe

Our CONDITIONING ROOM EQUIPMENT

Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)

Our AUTOMATIC TEMPERATURE CONTROL

Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS

AMERICAN MOISTENING COMPANY

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SOUTHERN OFFICES, 276 Marietta St., Atlanta, Ga., No. Charlotte, N. C.

66° TEXTILE CLEAR SULPHURIC ACID

Manufactured Especially for the Textile Trade by the
Largest Sulphuric Acid Producer in the World

ALSO

60° and 66° Commercial Sulphuric Acid

PROMPT SHIPMENT

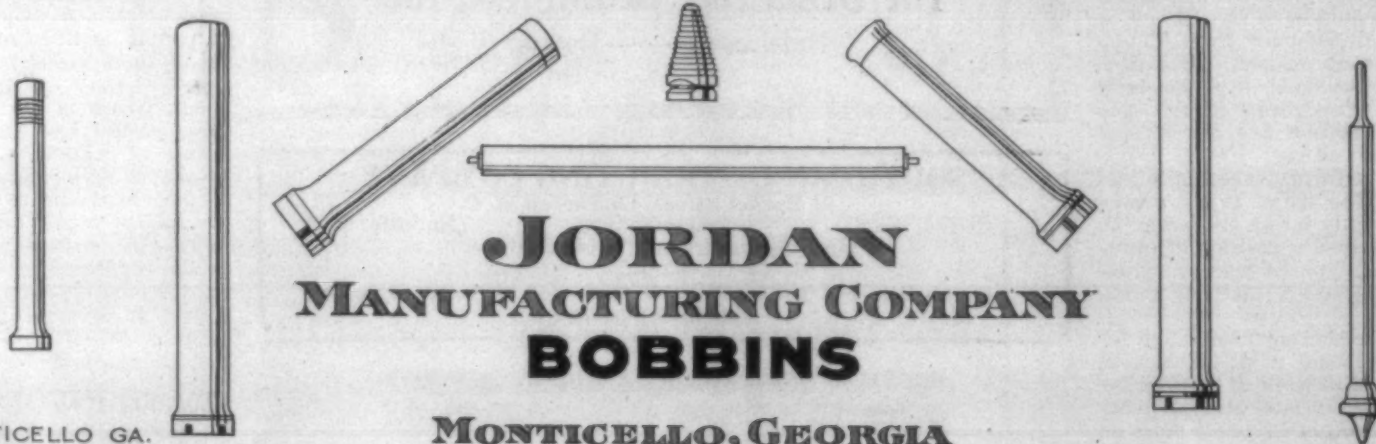
Any Quantities in Tank Cars, Drums, or Carboys—

Write Us for Prices

SOUTHERN AGRICULTURAL CHEMICAL CORP.

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MILLS AT
MONTICELLO GA.
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**JORDAN
MANUFACTURING COMPANY
BOBBINS**

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SCOTT TESTERS

The Standard of The World For Tests of Fabrics,
Yarns, Twines, Etc.

Manufactured By
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or covered).

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SHUTTLES

We make a specialty of
Shuttles for all makes of looms,
both plain and automatic.
Correspondence solicited.

"HIGH GRADE"

**BOBBINS
SPOOLS
SHUTTLES
SKEWERS
ROLLS, ETC.**

OF EVERY DESCRIPTION

**THE
DAVID BROWN COMPANY**

Lawrence, Mass.

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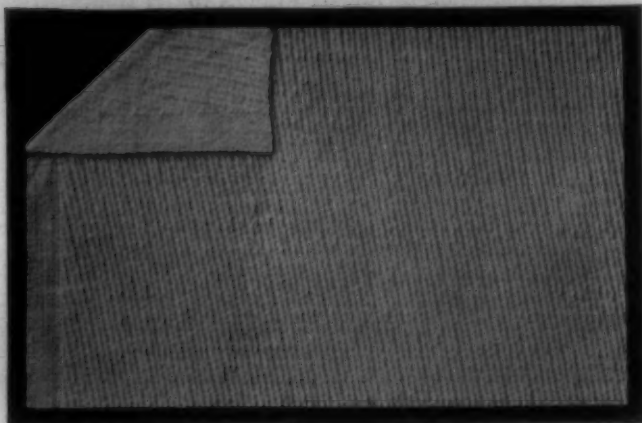
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AUTOMATIC SHUTTLES

Try Our New Automatic Shut-
tles for either cotton or woolen
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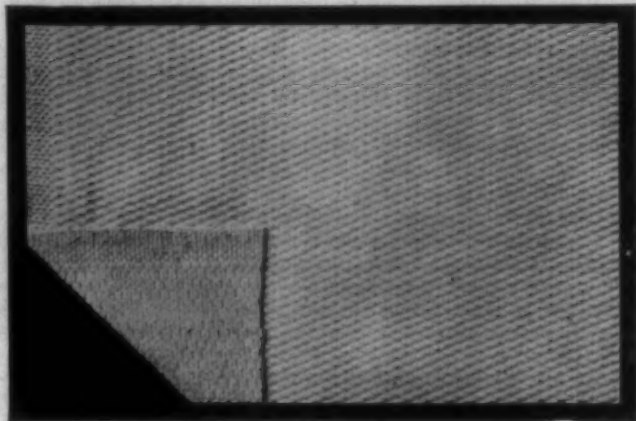
Imported Cotton Cloths

From Survey of United States Tariff Commission.



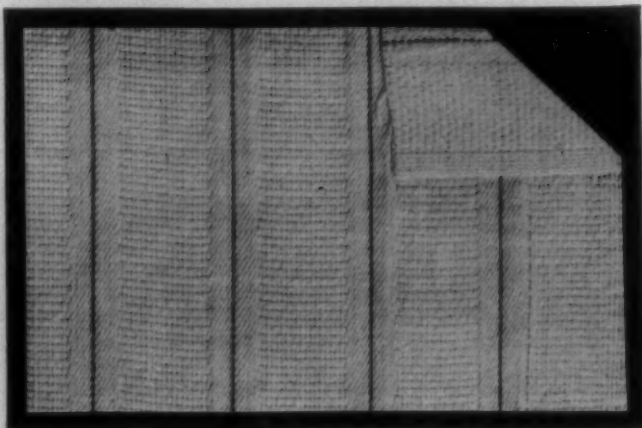
Sample No. 62.—Steep Twill.

Dobby woven (11-harness). Finished width, 39 inches. 148 ends and 64 picks per square inch, finished. Warp yarn, 33s. Filling yarn, 31s. Weight, 3.01 linear yards (3.26 square yards) per pound, finished. Bleached.



Sample No. 63.—Fancy Pique.

Dobby woven on box loom. Finished width, 28 inches. 155 ends and 223 picks per square inch, finished. Warp yarn, 77s face, 82/2 back. Filling yarn, 90s face, 11s back. Weight, 2.24 linear yards (1.74 square yards) per pound, finished. Bleached.



Sample No. 64.—Fancy Oxford Shirting.

Dobby woven (6-harness). Finished width, 32 inches. 144 ends and 90 picks per square inch, finished. Warp yarn, 41s, bleached. 80/2, dyed. Filling yarn, 41s, bleached. Weight, 4.5 linear yards (4 square yards) per pound, finished. White warp, with turkey red pin stripes; white filling.

Sturdy receptacles stand hard blows

Trucks, cans and boxes built of the right material protect property and save trouble



A HARD BLOW—a splintered surface, and the wooden receptacle is no longer fit for use. Cracks and jagged edges catch and tear materials in process. Workers' hands and clothes suffer injury.

Diamond Fibre Mill Receptacles stay smooth after years of hard use. The material is light, tough, resilient. Bumps and blows fall harmlessly on the smooth, strong surface.

Materials in process cannot suffer damage, for there are no projections, crack or rough places in these steel-hard receptacles. They protect hands and clothes of workers.

It is easy to keep Diamond Fibre Receptacles clean. The material does not absorb oil, grease or water. Dust and dirt do not adhere to the surface.

Receptacles for mill or factory

You can get Diamond Fibre Receptacles for every kind of use in textile mills and other manufacturing plants. Our line of **smooth inside** receptacles includes: trucks, roving cans, trays, boxes, barrels, doffing trays, gill cans, etc., in standard sizes. For special types and sizes, submit specifications.

We make a large number of smooth, durable special parts for mill use. Among these specialties are: spool heads, loom picks, swift braces, spindle guards, thrust washers, shuttles, flier disks, lacing combs, etc.

You will be interested in our new booklet, "Diamond Fibre Receptacles." It contains descriptions and specifications of all standard sizes of **smooth** receptacles and special parts.



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"HAWK"

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Thin Boiling*

STARCH

"Hawk" is clean starch of full strength, very carefully made from selected raw material.

It is rigidly inspected at each stage of manufacture, and nothing but perfect starch is shipped.

"Hawk" can be furnished in any desired viscosity. Each shipment is uniform with the preceding one.

That is why leading mills find "Hawk" dependable.



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61 BROADWAY, NEW YORK.

Southern Office:
908 Johnston Building
Charlotte, N. C.
Ira L. Griffin, *Manager*

Carding and Spinning

(Continued from Page 20)

Production of Roving Frames for 10 Hours

TABLE FOR 4½ AND 4¼-INCH SPACE

Number of Roving	Twist Per Inch	Rev. of 4½-in. Space Front Roller	Number of Hanks	Number of Lbs.	Rev. of 4¼-in. Space Front Roller	Number of Hanks	Number of Lbs.
4.00	2.40	155	9.6	2.4	—	—	—
4.50	2.54	150	9.4	2.1	—	—	—
5.00	2.68	139	8.9	1.8	—	—	—
5.50	2.81	134	8.7	1.6	—	—	—
6.00	2.94	128	8.4	1.4	—	—	—
6.50	3.06	123	8.1	1.2	—	—	—
7.00	3.17	117	7.7	1.1	—	—	—
7.50	3.29	112	7.4	.99	—	—	—
8.00	3.39	112	7.3	.93	132	8.48	1.06
9.00	3.60	—	—	—	126	8.19	9.14
10.00	3.79	—	—	—	120	7.90	.790
11.00	3.99	—	—	—	114	7.55	.687
12.00	4.16	—	—	—	108	7.20	.600
13.00	4.33	—	—	—	105	1.06	.543
14.00	4.49	—	—	—	99	6.68	.477
15.00	4.64	—	—	—	95	6.43	.429

TROUBLES ENCOUNTERED IN RUNNING ROVING FRAMES

Cut or Uneven Roving.—Assuming that the drawing is all right, the most fruitful source of this trouble is lack of oil on the rollers. The worst case the writer ever saw was from this cause. For some reason the slubber tenders had been changed several times within two weeks and none of them had oiled the rollers. Before the trouble was located a large quantity of stock was in process, and an immense amount of bad work resulted. The front top rollers should always be shells, and every Saturday evening they should be removed and the arbors wiped dry. On Monday when they are replaced they, as well as the middle and back rollers, should be carefully oiled.

It sometimes happens that from the lack of oil on previous occasions, the saddles and stirrups have worn to an exact fit, and if the rollers get the least bit out of alignment they will bind and stop momentarily. This will of course cause cut roving. Very bad work has also resulted from one or two teeth being broken from a gear, sometimes by design, and when the blank space comes around the middle or back roller stops a little while the others go on. Occasionally, for one reason or another, a few of the roller weights are taken off, and when replaced are put back wrong, that is, the heavy ones are put on the roller where the light ones were. This will cause trouble which is very hard to locate. Excessive draft will always cause uneven roving. The question will of course arise, what draft is excessive? A general rule is that 4, 5 and 6 should be the maximum on slubber, intermediate and fine frames, respectively. If jacks are used, not over 6½ should be drawn. This is not a rigid rule, and circumstances may arise where these drafts may be exceeded.

In process of time, gears may break or wear out, and be replaced by others of a slightly different size. This may throw the distribution of drafts wrong, and cause a great deal of trouble. Where shell rollers are used, and two of an unequal size are put on the same arbor, the larger part of the weight is evidently on the ends, and as the roving traverses back and forth over the heavily and lightly weighted parts, the draft is sure to be affected. When the top rollers are not in line with the bottom rollers, bad work is likely to result, and besides shorten the life of the roller from 25 to 50 per cent. All cap-bars should be set with a gauge, which is simply two boards nailed at right angles to each other. The wider one, which rests on the steel roller, has projecting fingers, which are spaced exactly as the top rollers are to be spaced. These fingers fit into the nebs of the cap bars, and when they are tightened every roller will be in exactly the same position.

In a previous paragraph, we called attention to the necessity of having the proper tension between the front rollers and the flyers. If there is a draft, it will certainly be irregular and cause irregular roving. We once knew of a new frame being started where this draft was so great that a change in the draft gear had but little effect on the weight of roving and for some time the overseer and superintendent were literally at their wits' end to know where the trouble was. When roving is cut at regular intervals it is easy to trace the cause. If the thin places are about 3½ inches apart, it is very likely there is a bad lap on the top roller, which is a very frequent cause of trouble. If the spaces are, say, a foot apart, they are probably caused by a bad middle roller. The whole question is one which should receive the closest attention from the overseer.

Tangled Bobbins.—This trouble may be, and frequently is, caused by an improper taper. As is explained under calculations, the layers of roving should be so that they will just touch, the proper number per inch being twelve times the square root of the number of roving. Each successive layer should have one row less, so that each strand will lay in the hollow formed by the two strands directly under it. If the taper is too steep, with rough treatment some of the strands will slip off. Tangled bobbins are frequently made by the frame failing to change, and the traverse running over or under. On frames using a screw-builder motion,

like the Providence, Woonsocket or Lowell, the spiral spring may be out of fix, but more frequently the end of the sliding jaws have become so worn that the motion does not change at exactly the proper time. This trouble may be overcome by filing the arm, and putting on a steel plate, which of course has a square end. In time the bevel gears either on the upright shaft or the top cone shaft, may become worn so that the teeth fail to engage. This may frequently be remedied, at least temporarily, by raising the upright shaft and putting packing in the step. A copper penny is the exact size, and answers the purpose well. If it is the large or skip gear which is worn, as usually only two or three teeth are affected, it may be made as good as new by changing from a right-hand to a left-hand frame. By this means, the teeth on the opposite side of the skip, which are not worn, are brought into use.

If the ratchet-gear builder motion is used, such as is generally on English frames, the arms which cause the change, sometimes called triggers, become worn so that they are not exactly square. Round corners will cause the motion to change at irregular times, and a bad taper is the result. When they first begin to wear, they may be filed square, but soon become too short, and have to be replaced. In setting this motion, care must be taken that when the carriage is in the center, the pocket-stick, or toothed lever, be exactly level.

Ends Slacking Down.—When the ends suddenly slack down and tangle at the flyer, a cone belt has either broken, or a gear slipped. It is when the ends slack and perhaps not tangle badly, that the real trouble is encountered. This may often be caused by the cone-belt slipping. For a test, some one may tighten the belt by pressing the cone down with the foot. If this is not the trouble, it may be a set screw slipping. If a trial with a wrench fails to find a loose one, all the important gears in the train from the compound motion to the bottom may be marked with chalk or a punch, and the frame again started. This will show where the slip is. If the trouble always occurs at a certain point in the lift, it is good evidence that a motion somewhere is binding, and causing the cone-belt to slip. It is sometimes necessary to disconnect the whole bobbin motion, and turn the compound by hand until the trouble is located. Most of the trouble of this nature is the result of careless oiling. The oiler may think he is oiling every place, but it does not take long for an oil-hole to get choked with lint, and the oil wasted.

Hard Ends.—This is the general name for the trouble when the roving comes through without being drawn. It is usually caused by bad piecing in the previous process. When an end breaks down, the speeder-tender in piecing it up generally wets the end so it can be readily threaded through the eye of the flyer. If this wet and twisted end is not broken off before piecing up, when it comes to the next machine it will not draw. It is not unusual for the speeder-tender to put in twice the usual twist in order that the roving may easily stand the strain of threading it through the flyer. Even if the wet end is broken off, the roving will often fail to draw. The remedy is to have the attendant put in just as little twist as will enable him to piece up the ends.

There will also be hard ends when the rollers are set too close for the length of staple. Two rollers, having hold of the fibers at the same time, it is obvious that they will not be drawn. The remedy is to have the rollers further apart. The front and middle should be set so that the bite is 1-16 inch further apart than the length of the sliver. The middle and back roller may be 2-16ths. For further explanation, see "Setting of Drawing-Frame Rollers."

There is a great deal written about excessive drafts, but very little about deficient drafts. As a matter of fact, there can be too little draft on the speeders, and when this is the case hard ends or undrawn roving is the result. Where only a sample is wanted, the trouble may be stopped by taking the weight off the middle roller.

Black Oil.—This is a trouble always to be guarded against. A certain amount of oil may get on the roving when oiling the rollers, but this is not the chief trouble. In all well-regulated mills, the speeder-tenders are required to oil the spindles after the first doff in the morning. As the frame runs, more or less lint will stick to the oily spindles, and when the frame is again ready to doff, there will be a small collar of oily lint around the spindle at the top of the bobbin. If this is thrown off carelessly in the box with the roving, it is almost sure to stain it. The remedy is to remove the oily waste before doffing. Of course it is some trouble, but where the goods are fine, a yard is worth something, and one black thread may throw the whole piece into seconds. Where the goods are not so fine, this trouble is not so likely to occur, as a frame doffs too often to accumulate waste. These black specks cannot always be readily removed before doffing, and can frequently be seen on the roving in the creels. The speeder-hands or spinners should be trained to carefully pick off all they see.

Yellow oil may get on the cotton at almost any time. It must be carefully guarded against. Yellow crayon should not be used, as it is often mistaken for oil. For a similar reason very deep colors should not be used, as they will certainly show in the finished cloth.

Clearer Waste in Roving.—This may be avoided by having the clearers picked more often. It is of great importance that this be done, for if not the waste will occasionally be licked up by the roving, or it may drop in a mass to the roving and make a heavy slub. This will usually break back at the spinning frame, but if it does not, a long thick place is made in the yarn. On long-staple cotton this trouble is much more prevalent, as the rollers are too far apart to help hold the waste together.

(Continued Next Week)

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It will not creep out on the rolls—this allows longer life to leather coverings of top rolls that soon must be replaced when oil-soaked.

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Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Page	Page
A	
Allis-Chalmers Mfg. Co.	10
American Laundry Machinery Co.	29
American Moistening Co.	29
American Textile Banding Co.	39
American Trust Co.	44
Amory, Browne & Co.	41
Anchor Post Iron Works	41
Arabol Mfg. Co.	50
Arnold, Hoffman & Co.	36
Ashworth Bros.	36
Atlanta Brush Co.	46
Atlanta Harness & Reed Mfg. Co.	46
B	
Bahnon Co.	37
Baily, Joshua L. & Co.	44
Bancroft, Jos. & Co.	42
Barber-Colman Co.	35
Barber Mfg. Co.	40
Barton, Ernest L.	46
Best, Edward H. & Co.	51
Borne, Scrymser Co.	30
Bosson & Lane	30
Brown, David Co.	19
Brown St. Onge Co.	45
Butterworth, H. W. & Sons Co.	45
C	
Carrier Engineering Corp.	27
Catlin & Co.	27
Charlotte Leather Belting Co.	27
Chicago Belting Co.	27
Chicago Fuse Mfg. Co.	27
Cocker Machine & Foundry Co.	27
Collins Bros. Machine Co.	27
Cooper-Hewitt Electric Co.	27
Corn Products Refining Co.	27
Courtney, Dana S. Co.	27
Chickasha Cotton Oil Co.	27
Crompton & Knowles Loom Works	27
Curran & Barry	27
Cyclone Fence Co.	27
D	
Dan Gear Co.	27
Dary Ring Traveler Co.	27
Davidson, Jos. L. Co.	27
Diamond State Fibre Co.	27
Dixon Crucible Co., Joseph	27
Dixon Lubricating Saddle Co.	27
Drake Corp.	27
Draper, E. S.	27
Draper Corp.	27
Dronsfield Bros.	27
Druid Oak Belting Co.	27
Duplan Silk Corp.	27
DuPont de Nemours, E. I. & Co.	27
E	
Economy Baler Co.	27
Emmons Loom Harness Co.	27
Entwistle, T. C. Co.	27
F	
Fafnir Bearing Co.	27
Fairish Co.	27
Fremmen's Mutual Insurance Co.	27
Ford, J. B. Co.	27
Franklin Process Co.	27
G	
Garland Mfg. Co.	27
General Electric Co.	27
Grant Leather Corp.	27
Graton & Knight Mfg. Co.	27
Greist Mfg. Co.	27
H	
Hepworth, Jno. W. & Co.	27
H. & B. American Machine Co.	27
Hollinsworth, J. D.	27
Hopedale Mfg. Co.	27
Houghton, E. F. & Co.	27
Howard Bros. Mfg. Co.	27
Hyatt Roller Bearing Co.	27
J	
Jackson, Hill & Co.	27
Jacobs, E. H. & Co.	27
Johnson, Oliver & Co.	27
Jordan Mfg. Co.	27
K	
Kaumagraph Co.	27
Keever Starch Co.	27
Klauder-Weldon Dyeing Machine Co.	27
L	
Ladew, Edward R. Co.	27
Langley, W. H. & Co.	27
Lestershire Spool & Mfg. Co.	27
Leslie, Evans & Co.	27
Link-Belt Co.	27
Lockwood, Greene & Co.	27
Lowell Shuttle Co.	27
M	
Macrodi Fibre Co.	27
Marston, Jno. P. Co.	27
Mathieson Alkali Works	27
Mauney Steel Co.	27
M	
Memphis Cotton	42
Merrow Machine Co.	43
Metallic Drawing Roll Co.	49
Metz, H. A. & Co.	51
Minter Homes Co.	43
Mississippi Cotton	36
Moreland Sizing Co.	38
Morse Chain Co.	39
Mossberg Pressed Steel Corp.	45
Mc	
McCaughy, Edward J.	42
N	
National Aniline & Chemical Co.	42
National Ring Traveler Co.	42
Newburger Cotton Co.	42
N. Y. & N. J. Lubricant Co.	47
North Carolina Cotton	49
Norwood Engineering Co.	43
O	
Oklahoma Cotton	38
P	
Page Fence & Wire Products Assn.	45
Palge, Schofield & Co.	45
Parker, Walter L. Co.	45
Parks-Cramer Co.	45
Paulson, Linkkroon & Co.	50
Pawtucket Spinning Ring Co.	14
Penick & Ford, Ltd.	28
Perkins, B. F. & Sons	29
Puro Sanitary Drinking Fountain Co.	45
R	
R. I. Warp Stop Equipment Co.	29
Rice Dobby Chain Co.	45
Ridley, Watts & Co.	52
Roessler & Hasslacher Chemical Co.	27
Rogers Fibre Co.	27
Root Co.	27
Roy, B. S. & Son	21
S	
Saco-Lowell Shops	30
Sayles Finishing Plants	39
Scott, Henry L. & Co.	40
Seaboard Ry.	20
Sellers, Wm. & Co.	33
Seydel Chemical Co.	35
Seydel-Thomas Co.	35
Siggers & Siggers	11
Sirrine, J. E. & Co.	32
S. K. F. Industries	35
Sonoco Products	35
Southern Distributing Co.	35
Southern Ry.	35
Southern Agricultural Chemical Co.	35
Southern Spindle & Flyer Co.	35
Spinks, John D.	35
Stafford Co.	35
Steel Heddle Mfg. Co.	35
Stein, Hall & Co.	35
Sydnor Pump & Well Co.	35
T	
Tatum, Pinkham & Greey	44
Terrell Machine Co.	47
Texas Cotton	47
Textile Mill Supply Co.	44
Thomas Grate Bar Co.	41
Tolhurst Machine Works	51
Tripod Paint Co.	2
U	
United Chemical Products Co.	30
U. S. Bobbin & Shuttle Co.	46
U. S. Ring Traveler Co.	46
Universal Winding Co.	35
V	
Victor Ring Traveler Co.	41
Virginia Machinery & Well Co.	29
Vogel, Joseph A. Co.	51
Van Lindley, J. Nursery Co.	15
W	
Watson, L. S. Mfg. Co.	2
Wellington, Sears & Co.	44
Westinghouse Electric & Mfg. Co.	15
Whitin Machine Works	2
Whitinsville Spinning Ring Co.	25
Williams, J. H. Co.	35
Williams, I. B. Son	35
Wilts Veener Co.	35
Wolf, Jacques & Co.	35
Woods, T. B. Sons Co.	35

Studying the Job

(Continued from Page 24)

They thought, therefore, that no yard stick could be developed by which they would be able to pre-determine what could be gotten out of any hide. Their contention was that it took a cutter several years to be able to tell by "feel" the thickness and quality of every part of a hide, so as to lay in his patterns to get maximum money value out of his cutting. To make a long story short, a yard stick was developed by which it was possible to predict accurately what was actually produced by a good cutter following out the patterns laid out for him. It was a measure of the efficiency of the poor cutter, so that from this time on they can't say, "It isn't in the leather."

Results in Proportion to Responsibility.

The results obtained through steps one and two are in proportion to the amount of responsibility the management, on the one hand, and the employees, on the other hand, take in doing the part over which they have full control. The management, for instance, at certain intervals, establishes its manufacturing policies, and with this as a base it controls the placing of manufacturing orders and the purchasing of materials. The management alone can control these factors, and either through good planning and control assist the employees to get large production at a low unit cost, or through poor planning and control prevent the employees from working effectively, which means dissatisfied employees and high unit costs.

The employees soon see the advantages they get with the management assuming its responsibility, and they also realize that with an accurate measuring stick their own particular work can be definitely evaluated. This stimulates the employee to plan and control those factors over which he has control so as to get as large a return as he can, which means a good return also to the management.

Management and Employees Become Partners.

We thus see that by studying the job the management and the employees become partners, and, as such, an accounting must be made at regular intervals to determine the share of return each should receive. The employees must have theirs each pay week, while the management cannot close its books oftener than once a month. This is not necessary, however, for as long as the measuring stick is applied daily to each job performed, and the quality and quantity fall within the established measure, the company is assured its share of the return.

The advantages from this most healthy combination of interests is invariably realized by both parties, even during the development period, and we find it stimulates the whole organization and they become wide-awake, thinking, and happy. This atmosphere can be made permanent, even when conditions are changed materially, due to trade requirements, amount of business, etc.,

provided the third step is taken, to perpetuate the results obtained through studying the job.

Conditions Constantly Changing.

During the period when steps one and two are being taken, and for some period thereafter, the quality and quantity of work turned out is carefully measured and everything goes along smoothly. Both the management and the employees are well satisfied, and work hand in hand, together, especially as long as all conditions remain the same. Conditions in every company change, nevertheless, in some respect every year. In some, a gradual change takes place in the personnel of the employees, in others, the product changes, etc. It does not take very long, then, before the management finds that some of the standards that were used successfully in the past are considered by the employees as unfair, and that some of the standards do not apply to the new product, or to the new kind of yarn now being used.

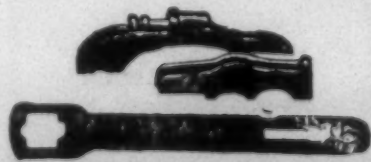
The answer to contentions of this kind is to study the job, and determine the actual effect the change has on the quality and quantity of the product. This is quite a simple thing to do, provided the company has kept the nucleus of its development organization, who can, with a very few studies, determine accurately by comparing the new data with the data in the company files, the new standard. In those organizations, however, who felt there was no further need for anyone to follow up the standards, and who have not preserved the original data, it will be a slow and sometimes a costly task to regain the good will of the employees and set up standards that are equitable to the employees as well as to the company.

In order to perpetuate the results obtained through studying the job, it is necessary to keep up the standards to meet all of the changing conditions. Standards that are 100 per cent under conditions of the skill of the employees, machinery and equipment of today, may be anything below 100 per cent under conditions several months or several years from today. Competition is becoming keener all the time, and it is for this reason that those who are so fortunate as to have been at the fore in studying the job must not fail to take the final step to perpetuate the results, and thus keep the advantage they have over their competitors.

In closing I want to again state that studying the job applies to every phase of industry, whether it be merchandising, purchasing, overhead, or direct labor. I have used in my illustrations the labor factor, because it is the field in which most of the work has been done in the past ten years, and would therefore be a common ground of understanding to the largest group of executives. The same fundamental principles are being used in studying the job of every other factor that affects the balance sheet, and the results that are going to be accomplished in the next ten years in these various fields are going to be, without a doubt, stupendous.

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WRITE FOR SAMPLES

American Cotton Piece Goods Export Markets

Washington.—Using for one purpose or another about twice as much as the next nearest country, the United States is the world's largest consumer of raw cotton, despite the fact that Great Britain, for example, which consumes only half as much cotton as we do, possesses about 56,000,000 spindles against 37,000,000 spindles in place in this country, according to E. T. Pickard, chief, Textile Division of the Department of Commerce Reports.

"The per capita consumption of raw cotton in the United States is about 30 pounds yearly," Mr. Pickard states, "a figure far outdistancing the country of next importance. This per capita is by no means wholly attributed to the demand for clothing or goods for personal and house-hold use. Cotton itself or by-products thereof are used for many purposes apart from those of a more intimate character. For example, the artificial silk, artificial leather, photographic film, celluloid, electrical, and automobile trades with many others have been contributory factors in bringing the per capita cotton consumption up to this figure.

"Being the world's largest producer and consumer of raw cotton, the United States today is in the incongruous market for foreign cotton cloths. When one realizes that in the calendar year 1923 we imported close to 225,000,000 square yards of cotton cloths, a figure which is approximately half the quantity of our total exports of cotton cloths, the significance of the statement is emphasized.

Imports of Unbleached Goods Up.

"Though the total imports of cotton cloths into the United States for the first nine months of 1924 declined somewhat, that class of goods with which we are mostly competitively concerned, namely unbleached goods, is being imported in increasing quantities monthly.

"For the first nine months of 1924 our exports of cotton cloths amounted to 335,000,000 square yards, some 12,000,000 fewer yards than we exported in the same period of 1923. Notwithstanding this the present movement seems to be on the increase and considering informal reports on prospective business and orders on hand, it is reasonable to conclude that the end of the year 1924 will show some advance over the exports of 1923.

"When we think of exports of cotton goods our minds naturally turn towards those conventional and time honored markets of Latin-American and the Near East, for example. Is it realized by very many that in one month we shipped unbleached cotton cloth in sums of 163,000 square yards to Greece, 54,000 yards to England, 80,000 yards to some of the Balkans, 1,154 yards to Canada, 751,000 yards to Salvador, 350,000 yards to Jamaica, 457,000 yards to Haiti, 1,261,000 yards to Chile, 390,000 yards to India, 94,000 yards to British East Africa, or 80,000 yards to the Canary Islands? Is it realized that our exports of cloth to Egypt, the Netherlands East

Indies, and Singapore, to mention but a few, are practically nil, whereas the imports of cotton cloths in those countries represent their chief item of business.

"Even in bleached goods we have shipped in certain months 68,000 square yards to Newfoundland and Labrador, 42,000 yards to China, 24,000 yards to Japan, 13,000 yards to Palestine, 95,000 yards to Australia, 36,000 yards to French Oceania, 187,000 yards to British East Africa, etc.

Capacity Above Requirements.

"In printed goods in one month we exported 55,000 square yards to England, 754,000 yards to Mexico, 2,355,000 yards to Cuba, 215,000 yards to Venezuela, 40,000 yards to English India, 36,000 yards to China, 2,961,000 yards to the Philippines, 68,000 yards to French Oceania, while smaller quantities, which might be increased with some little effort have gone to Korea, Japan, Egypt, Liberia, British Guiana, Greece, Bulgaria, Norkary, etc.

"Are you getting any of this business? When you conjure up a picture of export trade, is it in terms of comparatively easy markets, like Canada, Mexico, Cuba, and Latin-America, confirmed letters of credit and arm chair practises? Or are you willing to go to a little trouble in finding out what countries do use goods that we could supply, how they buy them, how they pay for them, and what extraordinary efforts you would have to make to share in the trade?

"This country under present conditions and those likely to prevail in the immediate future" concludes Pickard, "has a capacity to produce at least 20 per cent in excess of domestic requirements. There is no magic in the process; on the other hand determined effort consistently applied should yield the same results experienced in Italy where last year they consumed more cotton than ever before in their history, for more than two years have been free from strikes and lockouts, and by the application of will and industry have been able to increase their exports from approximately 20 per cent of their total production two years ago to approximately 50 per cent of their production this year."

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When Barber Spinning Tapes drive your frames you may be sure of obtaining the maximum amount of service. There are no driving tapes on the market that can equal them for strength and length of life. The savings in tape effected by the use of Barber's will quickly amount to a considerable sum.

Even before the first tape driven cotton frame was in operation these tapes had proved a great service on worsted and jute drives. The first company to manufacture driving tapes, the Barber Mfg. Co. has always maintained its position as leader in its field.

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We have opened a Victor Ring Traveler branch office at Gastonia, N. C., under the personal management of Mr. A. B. Carter. It stocks a complete assortment of Victors in all sizes, styles, and weights.

Use this convenient "service station" when you need Victors. If you don't already use them, ask Mr. Carter to give you a few pointers on traveler efficiency, together with a supply of FREE SAMPLES to try out.

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Is made on
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handle with
pegged solid
back con-
struction.
Length over
all 13 1/2",
brush part
5 1/2".

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COMBER
DUSTER

Horsehair
duster of
standard wire
drawn con-
struction. Has 7" brush
part, handle is
14".

In our files are many examples of where we have suggested a particular comber duster for a special use and our advice has been the means of effecting a big saving for the mill.

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prefer the 42,
which is the
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41, except that
it has a 5"
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An all bristle
duster. Same
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and specifica-
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Press Comment on Child

Labor Amendment

Advocate of Amendment Admits Its Purposes.

Wiley H. Swift, of Greensboro, N. C., an employee of the National Child Labor Committee, said in a recent address at Pittsfield, Mass.:

"The Child Labor Amendment is not so much for the protection of children under 12, or even 14, as for the protection, development and education of children 14 to 18 years of age. There are, I think, very few if any children under 12 in our Southern mills and no large number under 14. The trouble with us is that we think that a law that merely keeps children under 14 out of mills and factories is the last word in child labor legislation.

This is a frank admission that the proposed amendment is not intended or needed for the purpose generally understood by the public.

Child Labor Amendment Will Be Fought by Ohio Farm Organization.

The Ohio Farm Bureau Federation will fight the Child Labor Law Amendment when the matter is put before the Ohio General Assembly for ratification in January. L. B. Palmer, president of the federation, said that his organization is not opposed to child labor control, but believes that such affairs are better left to States and local governments, which know conditions at the operating point of the law. "We believe in the regulation of child labor," Palmer said, "but this law will put it in the hands of Congress. Every State has different problems to face, and the situation cannot be handled nationally. The proposed legislation will eventually prohibit children of farmers from working on farms in the summer. This is really recreation."—Wellstown (Ohio) Sentinel.

Amend the Amending Process.

Though the overwhelming popular verdict in this State against the proposed constitutional amendment to give Congress unlimited power over the labor of persons under 18 years of age will undoubtedly have influence upon the action of other States, its greatest service may be in checking the recent tendency of Legislatures to take such propositions at their face value and to act upon them precipitately with little regard to the possible sentiment of the people.

But the lesson so taught is by no means confined to this particular proposal. It has a far wider application. It should serve to make both Legislatures and people more careful students of propositions to change the fundamental law, particularly when they do not arise from any general appeal from the public but arise through the pressure of certain organized groups claiming to seek worthy objects. It is not enough to know that intentions may be good in matters of this kind. It is not the question of the power to

do things but where it shall be properly lodged. In such questions the people have primary rights. Sovereignty lies not in careless Legislatures nor in politically minded Congresses but in the people in whose name the fundamental law is ordained.—Springfield (Mass.) Union.

Congress Will Exercise All Powers Granted.

This amendment would compel and stimulate a whole new structure of bureaucratic supervision and record with costly and burdensome duplications of existing local administrative agencies. It contemplates and would inevitably produce centralized control of our entire educational system and would forever give to Congress more power for the control of youth than any American State now possesses.

To say that Congress will not exercise to the full extent all powers granted to it is to ignore the plain teaching of experience.—Mansfield (Ohio) News.

Problem of Child Labor.

There is every indication of a battle royal at the next session of Congress when the proposed Child Labor Amendment comes up for consideration.

It is scarcely to be believed that even the most ardent supporters of prohibition of child labor and find themselves wholly in accord with the full authority of the amendment to "limit, regulate and prohibit the labor of persons under 18 years of age." It is more probable that they are depending upon the discretion of Congress to pass some law that will stop ruthless employment of growing children, but will modify in other ways the language of the proposed regulations.

In this they are taking a long chance, for Congress does not always legislate wisely. There is apt to be a long drawn out fight and perhaps an eleventh hour passage of some measure that is extreme and uneconomic.

It is neither in the interest of the parents nor the child to prohibit all employment. The grinding work of the mill should not be the child's fate, but employment during vacations and on the farm at certain seasons is an economic necessity in many an American household. Besides, certain employment is necessary to the development of the child, teaching him industry and independence—those things so desirable when the time comes for him to go out into the world to make his own way. He needs also the physical development that certain work will give him.

The child should be given every opportunity for an education, every opportunity to develop his particular talents as they show themselves, but it is the height of folly to say that no young person, male or female, under 18 years of age, shall

seek employment. To do that would shut off many from an education; for many a young person's schooling depends upon his own earning power.

It seems to us that the ardent advocates of a child labor law, in their pity of conditions in certain sections of the country, have lost sight entirely of the interest of the larger class that seeks independence or must contribute in some way to the support of the family. We are tackling a big problem and one that demands the highest wisdom, if in our ardor we do not do more harm than good.—Brownsville (Tex.) Herald.

The Proper Place for Child Labor Legislation.

If half the effort which is being expended by "uplifters," who are really for "bureaucracy," were devoted to legislation in what they call "backward States," there would be no child labor in any State.—Nashua (N. H.) Telegraph.

States Can Handle Problem.

The Government at Washington has enough to do without regulating the lives of our children. The several States can take care of the problem of child labor far more economically—and far more wisely.—Albany (Ind.) Tribune.

A Deserved Defeat.

The negative voiced by Bay State voters on the Child Labor Amendment can clearly be taken as the fruit of both education and reflection. Had the "child labor" proposition been passed upon without such analysis, it might on the strength of mere name and sentiment have been sweeping carried. But there was pretty thorough dissection and evident study. When it was pointed out and understood just what was involved in the proposed bestowed upon Congress of power of "limit, regulate and prohibit" the labor of all under 18, a ringing popular "No" followed.

It came to be realized by the mass of the voters that here was suggested still another brand of bureaucratic paternalism, implying an abdication of all that is meant by "home rule"—either in the community or even literally in the home itself, within the fold of the family. The only mitigating argument advanced in rebuttal was that such power "might" not be used—by a Congress which for the first time would thus show self-restraint in employment of delegated powers.—Boston News Bureau.

Tons of False Propaganda.

The backers of the child labor law in the last Congress published tons of propaganda purporting to tell where hundreds of little children were working under terrible conditions in Maryland, in the truck fields, in Georgia, in the cotton mills, and in other States at various occupations, which have since been proven mostly false. They are again using the same false propaganda with the women's clubs, and many of these clubs, composed of good, hard-headed sensible mothers, who

should know better, are falling for the stuff and working for the child labor amendment, little thinking how deeply they, themselves, will be affected, did it become a part of the Constitution.—Portland (Ind.) Republican.

The Massachusetts Vote.

Massachusetts has served notice upon the nation that no child labor amendment to the Constitution, such as the voters rejected overwhelmingly yesterday, will ever find popular support in this commonwealth. The decision reflected the intelligence of the electorate as well as the ability of the voters to differentiate between legislation from which material benefits would accrue and legislation inimical to the interests of the people.—Boston Telegram.

The Massachusetts Objection to Child Labor Amendment.

The nearly 3 to 1 opposition to the Child Labor Amendment does not mean that the people of Massachusetts are in favor of unrestricted child labor. That State has been a leader in legislation for correcting abuses of the employment of children in industry. Rather it does mean that Massachusetts is against giving to the Federal Government the power to deprive that State and others of their States' rights and interfere with their regulation of child labor.—Newark (N. J.) News.

Defeat of Child Labor Amendment Predicted.

It is predicted that the Constitutional Amendment permitting Congress to regulate or forbid child labor will be defeated. Massachusetts at the last election voted against the proposal.

The opposition of Cardinal O'Connell, who is said to look upon the bill as threatening national interference with parochial schools, was probably most influential in deciding the result in Massachusetts.—New York American.

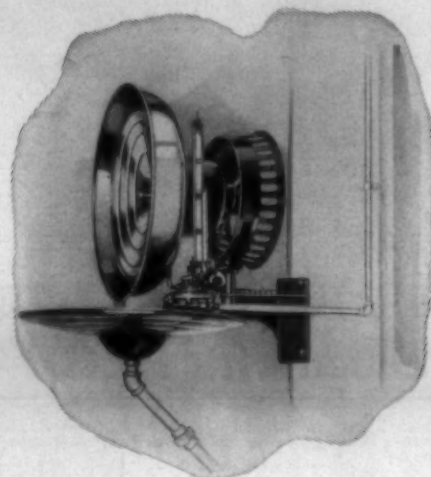
The Bay State Reason.

The vote in Massachusetts cannot be regarded, in view of the attitude of the State for the protection of children, as in favor of child labor that is unduly onerous for the child or depriving it of educational or other advantages. It is a declaration and protest against the text and meaning of the particular amendment proposed and a declaration to surrender the power of the State in this particular to the Federal Government.—Bangor (Me.) Commercial.

A Socialist Measure.

Victor Berger, the Milwaukee socialist, in a recent speech made an interesting disclosure about the proposed so-called Child Labor Amendment. His words follow:

"This is a socialist measure for which we have been earnestly working for thirty years. We are glad we are getting there. It is time to write a new Constitution adapted to the Twentieth Century, and not one written in the Eighteenth Century by men in knee pants."



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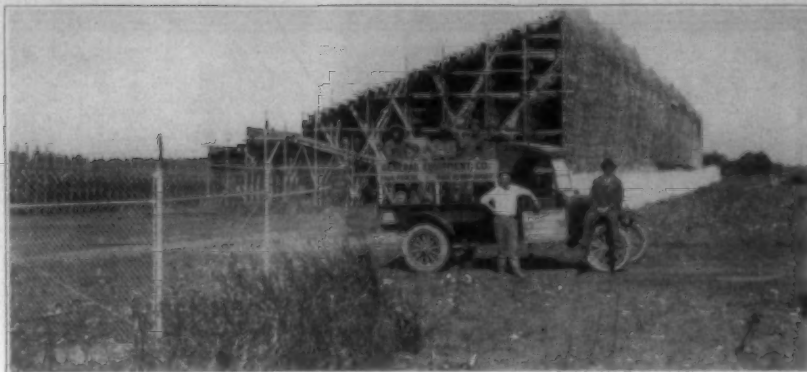
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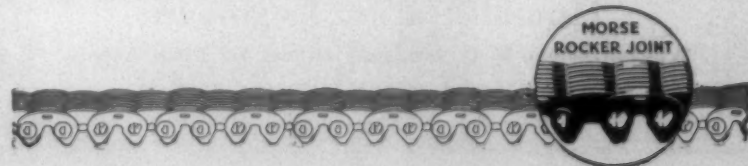
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United States Warehouse Act

(Continued from Page 9)

also operated a subsidiary warehousing corporation and, who a year prior or a month prior to the date of a certain break, could have walked into any bank in the South or East and, without giving any collateral, could have walked out with half a million dollars in his pocket. Then something happened. You had a loss of about two and a quarter millions.

We have plugged up that hole, we think, by requiring that all warehousemen operating under the Federal law must have their receipts printed on a form of paper specially designed and made by special manufacturers who have been placed under bond and contract with the department, and printed by specially designated printers who are under bond and under contract with the department.

When a warehouseman wants to order receipts, at the time he makes his application he must state how many receipts he wants. That order is entered on a register and the order is turned over to the printer. Before the printer sends out that order of receipts, we check it to see that the order has been properly filled and that it actually checks with the register. Then when our inspectors go about the warehouses to inspect they not only check the cotton but they have certain specific duties to perform with reference to those receipts. Every warehouseman must produce the particular number of receipts that were issued to him under seal or, in the absence of any receipt, a carbon copy of the original receipt. Then the inspector goes to the warehouse and locates the particular bale of cotton covered by that outstanding receipt or, if the cotton is not in the warehouse, then the warehouseman must produce the cancelled receipt.

Now you see we have a complete check on all the receipts. Let me remind you in this connection that each warehouse is checked at least four times each year, and if we find any condition existing at any time or have reason to believe that there is a condition existing which is not sound, we subject that warehouse to as many inspections as we feel are necessary. I might say in this connection that I have especially directed some warehouses to be inspected as many as six times inside of three months. I believe one has been inspected as many as eight times in three months. We did that not because we knew there was anything wrong, but there were certain conditions existing which we thought must be existing although we did not have positive proof. We finally found they were present in some cases, and in others they were not. That operates just as the United States National Banking Act is operating. We are doing exactly what the National Bank Examiners are doing in the field of banking, all for the purpose of accomplishing the big purpose of the Warehouse Act, namely, getting a form of warehouse receipt which will be accepted everywhere by bankers as good security for a loan.

When you come to the matter of operating a warehouse under a State law, what are the conditions? They range all the way from filing an application with a State official and filing a bond in a specific amount, and then the State official promptly forgets all about the warehouse.

I might cite any number of such conditions in different States. I think in your own State a great many of your warehousemen understand that all there is to it is to file a bond with a State official. I have not had any warehousemen tell me that they are checked up by a State official.

As to the warehouseman who is operating under no particular statute, I do not say anything. Their operations range all the way from the loosest of practices to some kind of protection.

Opinions on Act.

I need not take the time to read to you the opinions of some of the leading banks in the country with respect to the Federal Warehouse receipt. I believe that it has circulated in this particular territory that the Federal Reserve Bank of St. Louis, on August 16 last, adopted as a policy that after the first of September, 1924, it would accept no warehouse receipts as security for loans on commodities eligible for storing under the United States Warehouse Act, unless those particular receipts were issued by duly licensed warehousemen. And that particular ruling is being lived up to.

It will interest you men to know that a few days ago the board went still further. You men understand that a great many banks have been in the habit of asking concerns for financial statements—financial statements of the borrower, financial statements of the warehouseman with whom he has his products in storage. The Federal Reserve Bank of St. Louis dug into what we require in the way of financial statements and how we analyze those financial statements, and then they advised us that they have abandoned a requirement which they have always had—that they would accept no warehouse receipts unless they were furnished with copies of financial statements for the particular warehouseman. That following so closely on the heels of the resolution which they adopted on August 16, should be quite convincing to you men of the standing of the Federal Warehouse receipt in the eyes of bankers.

I might present you with resolutions from the New Orleans Clearing House Association, the Little Rock Clearing House Association, the Houston Clearing House Association, Oklahoma City Clearing House Association, Atlanta Clearing House Association, State Bankers' Association in Washington, and various other State bankers' associations, if I were so disposed, but I believe that throughout this particular New England section you all know the position that the Federal Reserve Bank of St. Louis has taken and I believe you are familiar with the general feeling that seems to be going about the country that the Federal Warehouse Act is a piece

of legislation which makes for getting the kind of warehouse receipt that we need to give proper credit standing to the producer, to the co-operative organization, the merchant and the cotton manufacturer.

Figures Showing Progress.

I think it will probably be quite conclusive if I give you a few figures of the progress made in the licensing of warehouses in the last few years. You will expect that right after the passage of the act some time will be necessary to be devoted to the drafting of proper regulations and naturally not much progress could have been expected. Considerable time would naturally be needed to acquaint producers, patrons of warehouses and bankers with the Federal warehouse receipt and its requirements. If you will bear with me a minute let me remind you that on April 1, 1924, our licensed storage capacity for cotton—I am talking in terms of licensed storage capacity; not in terms of the volume of stuff handled through licensed warehouses—on April 1, 1924, that licensed capacity for cotton was equivalent to 429,975 bales. On October 1, 1924, that capacity amounted to 2,640,000 bales, and the licensed cotton warehouses are scattered all the way from Virginia to Arizona.

It will interest you to know that on February 23, 1923, this law was amended at the insistent request of a great many organizations, some producers, some individual purchasers, manufacturers and merchants in different commodities. The amendment now provides that the secretary can extend the law, or make it applicable to such products as he may see fit from time to time, and since that time the law has been made applicable to peanuts, to the late crop of Irish or white potatoes, flour corn, dry edible beans and dried fruits. We have before us at this time for consideration some regulations on sirup.

Conclusion.

Let me in conclusion just leave with you this fact: If the Federal Warehouse Act is not administered soundly, if it is not administered to meet growing and changing conditions, then it must fail. If it is not administered in such a way that it will be apparent to all that it is not an unjust intrusion on the part of the Government into business, then it must fail. In conclusion let me say that the Federal Warehouse Act will benefit you only in proportion as you use it.

Conditions Better in Hosiery Market

Reviewing the hosiery and underwear markets, the current issue of the market service letter of the National Wholesale Dry Goods Association says:

Conditions in the hosiery market are claimed to have turned for the better and it is rather freely predicted the industry will witness greater buying actively and higher prices as a sequel to the long quiet spell. One well-known manufacturer of women's full-fashioned silk goods has already announced a 25 cents Although cotton and cotton yarns

have advanced, cotton hosiery is not reacting to the firmness of raw materials. Conflicting reports are current about artificial silk lines. Some intimate concessions and others deal with a possible increase because of an expected advance in artificial silk quotations. Viewed in its entirety, however, the market is said to be firmer than a few weeks ago, with a better tone prevailing.

One prominent hosiery factor states: "All raw materials have advanced, and the yarn people, both in cotton, silk and wool, are firm, and some of the yarn mills are sold up for three months, which makes them still more independent. I really think this feature should be emphasized. Certainly, if the present volume of business conditions and the mills have to buy new raw materials, they will have to pay more money for them, and, naturally, will have to raise the price on the manufactured goods, because there has been no margin of profit to play with, and I am sure our customers do not expect our mills to continue taking positive losses or sell at actual cost."

Statistics compiled by a well known hosiery concern indicate that colors continue in strong popular favor. A summary dated November 10 shows that 85 per cent of the hosiery sold the previous week was in novelty shades against 45 per cent black. Regulars comprised 52 per cent of the business against 48 per cent in sheers.

Production and distribution statistics compiled by the Department of Commerce indicate betterment was noticeable in September. Production and shipments both increased slightly and stocks on hand declined. Healthy gains were also shown by orders booked during the month and by unfilled orders on hand. The figures in dozen pairs covering 329 identical mills are as follows:

August—	
Shipments during month	3,799,795
Finished product on hand	
end of month	8,183,161
Orders booked during the	
month	4,141,615
Cancellations received during	
month	118,823
Unfilled orders on hand end	
of month	5,823,627
September—	
Shipments during month	4,395,372
Finished product on hand	
end of month	7,784,121
Orders booked during the	
month	4,897,200
Cancellations received during	
month	132,301
Unfilled orders on hand end	
of month	6,269,219

Underwear.

Underwear has not shared the improvement noted in hosiery. Only a fair demand for heavy weight lines has been sustained. Light weight goods are reported almost lifeless.

The heavy weight business is said to be suffering from unfavorable weather in widely distributed areas, and that a more active market cannot be anticipated until cold weather sets in. Such claims appear to find confirmation in reports of improved buying in localities where seasonable weather has arrived.

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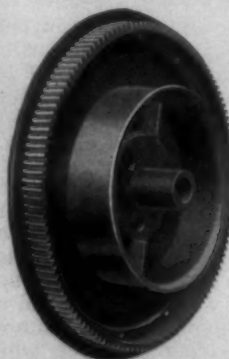
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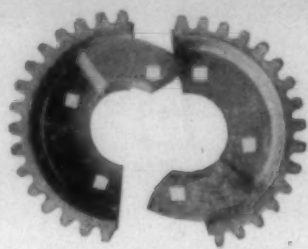


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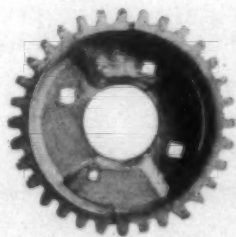
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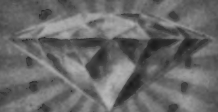
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An Efficient and Safe Motor Starting Installation

(By A. Dreifus, Safety Switch Engineer, Westinghouse Electric and Manufacturing Co.)

A very novel installation of Westinghouse type WK-10 and type WK-20 full safety motor starting switches is found in the new plant recently erected by the Indianapolis Glove Company, of Indianapolis, Ind. This plant is the largest in the world devoted exclusively to the manufacture of high grade canton flannel, jersey cloth, and leather palm gloves for workmen. In addition,



Fig. No. 1—One of the control panels making the installation safe, neat, compact, and accessible.

tion, a complete line of jersey and flannel mittens are made.

The plant employs over one thousand people, and a branch plant employing several hundred additional employees, is now in the process of erection. As most of the employees are women unfamiliar with electrical things, the utmost care was taken in selecting equipment that would offer the greatest safety to the employees, and which would at the same time reduced the fire and accident hazard to a minimum. As a result, Westinghouse full safety motor starting switches were adopted on account of their full safety features.

These switches are designed to fully protect the operator from accidental contact with live parts when going through the ordinary operations of starting the motor or refusing. All circuits to and from the switches are run in conduits entering at the bottom of the control panel. Furthermore, these switches offer both starting and overload protection to the motors which they control.

On each floor there are many rows of sewing machines, each row being driven by one 5 H. P. motor which is controlled by a Westinghouse motor starting switch. These switches are grouped together in central locations where they are mounted to control the nearby sewing machines. As the available wall space between windows was not large enough for the desired arrangement, a very novel scheme for mounting these switches was devised. Several special cabinets were designed and arranged to accommodate the number of motor starting switches which were required at any one central location. In this way, the switches for any group of nearby motors is

easily accessible, and all sewing machines in the entire plant can be started or stopped in a minimum time.

Predicts Lasting Prosperity

THE current improvement in cotton manufacturing is of a sound character and in all probability will develop into an extended period of prosperity in this industry, according to Alston H. Garside, industrial service manager of the Merchants' National Bank of Boston, addressing the convention of the New England Purchasing Agents at Providence.

Mr. Garside said that the two causes of the recent depression in cotton manufacturing have been the shortage and high price of cotton and the general business depression due to broad economic conditions, and both of these obstacles to the recovery of the industry have been removed.

"According to present estimates the world will produce fully 3,500,000 more bales of cotton this season than it did last season," said Mr. Garside. "The United States is increasing its output by about 2,700,000 bales, and foreign countries by about 800,000. Total world production this season promises to be about 23,600,000, compared with 20,100,000 last season, 19,100,000 two years ago, and only 16,200,000 three years ago.

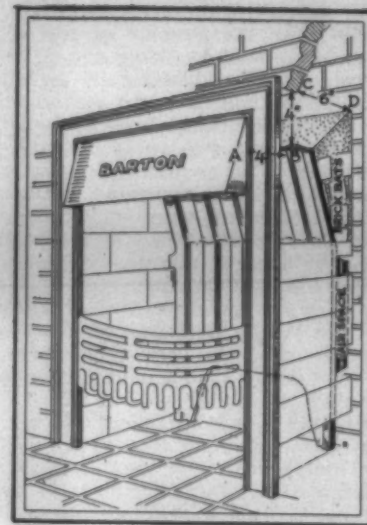
"This increase in the supply of cotton has resulted in a decline in the price of it, while prices of other commodities have been rising with the result that the price of cotton and of cotton goods are more than nearly line with general commodity prices than for several years. Taking 1913 prices as 100, on November 1, this year, middling upland cotton was selling at 185, 20s 2-ply carded yarn at 186, 4-yard brown sheeting at 185, and all commodities at 152. At the beginning of this year middling upland cotton was commanding 277, 20s 2-ply yarn 231, and 4-yard brown sheeting 224, while the average price of all commodities was 151.

"The demand for cotton goods has been limited in the past year by the fact that prices of cotton and cotton goods have been so far out of line with those of other commodities, merchants have been unwilling to buy more than necessary to meet their known requirements and ultimate consumption has probably been curtailed to some degree. Now that the spread between prices of cotton manufactures and other commodities has been narrowed, buyers can operate with much greater confidence and the purchasing power of the country for cotton goods has been increased.

"The second reason for the improvement in the cotton manufacturing industry is recovery of general business. The increased activity noted in many lines of industry in the past few weeks is due to the combined influence of various factors which are making for more active and more profitable trade, not only in this country but throughout the world.

"The restoration of the buying power of the farmers through in-

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creases in prices of farm products, the recent elections both in the United States and in England indicating that the peoples of these countries are tired of radicalism and attacks on legitimate business, the large volume of bank credit which is available for financing business expansion, and the adoption of the Dawes plan by Europe, indicating a willingness of the belligerent countries to forget the war and to settle down to business, and the extraordinary increase in our export trade—these are all highly favorable factors.

"The cotton manufacturing industry, supplying as it does one of the great staple needs of the people, usually prospers as general business prospers and is depressed as general business improves substantially as present conditions seem to forecast, the cotton mills will benefit from increased employment of labor and the increased income of wage earners, and the consequent expansion of the buying power of the public. Furthermore, it is not to be forgotten that a very large percentage of cotton goods goes into industrial uses and the demand for these will broaden as industry grows more active."

How Fabrics Wear and Retain Heat

The result of a series of tests of the heat-retaining properties of fabrics, by the U. S. Bureau of Standards have been collated and will be published soon, Director George K. Burgess announces in his annual report, made public recently. A short study of the effect of reworked wool in fabrics was also made during the fiscal year, says Director Burgess, showing that it was possible to use reworked wool and obtain a "fabric superior in wearing qualities to one containing all virgin wool."

The report shows that, in all, 79 tests of textiles were made for commercial firms, for which \$373.50 in fees was collected, while 4,595 textile tests were made for the Government by the bureau during the year. Of textile experiments, the report says:

"The results of a long series of tests on the heat-retaining properties of fabrics have been collated and are about ready for publication. In addition to the study of the actual transmission of heat in this problem, the permeability of the fabrics to air and water vapor was determined at the same time. This was done in view of the effect which the permeability of the fabric to air and moisture might have upon the passage of heat through it. As a consequence three different sets of apparatus were designed and sufficiently perfected to be considered finished pieces of laboratory apparatus. However, not enough types of

fabrics have been studied to permit drawing general conclusions, but it has been shown that the apparatus would be satisfactory for this purpose.

"The apparatus designed for testing the wearing qualities of textiles has been modified in such a way that it is now possible to use it for testing a wide variety of textiles on the market. It has been used during the past year for a study of the effect of changing the number of plies in serges with the yarn size and weight of fabric remaining the same. This particular investigation showed that there was a material difference in the abrasion of a 2-ply yarn over single yarns, and also that the effect of repeated stress was materially changed when the number of plies in the yarn differed. Some overcoatings and carpets, which had been specially treated, were compared on this apparatus with the untreated samples, and showed the superiority of the former over the latter. A short study of the effect of reworked wool in wool fabrics was made, and showed that it was possible to use reworked wool in fabrics and secure a fabric superior in wearing qualities to one containing all virgin wool."

An increase of more than 125 times its initial volume has taken place in the testing work of the Bureau of Standards during the 28 years of its existence, the report states. During the year just closed 135,852 tests were conducted by all divisions of the bureau, as compared with 115,729 in 1923.

"Most of the tests of the last year were executed for other branches of the Government, practically every branch making use of the facilities provided," the report states.

"A great deal of testing, however, is done for commercial firms and for individuals, over 40,000 test folders, covering over 600,000 such tests, for which a charge is made, having been issued since the founding of the bureau. The Government work is given precedence, however, and in some cases all testing except that for the Government has had to be refused because the demand exceeds the facilities for doing this work."

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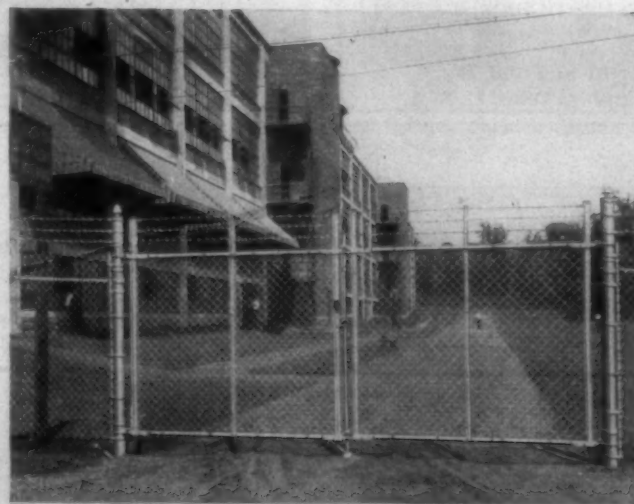
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Cotton Crop Estimate Is 12,992,000 Bales

Washington, Nov. 24.—The cotton crop was estimated today at 12,992,000 equivalent 500-pound bales by the Department of Agriculture. A crop of 12,816,000 bales was forecast a fortnight ago. Last year's crop was 10,139,671 bales.

Of the total crop 11,147,524 bales, counting round as half bales, had been ginned prior to November 14, compared with 8,369,498 for 1923 and 8,869,978 for 1922 to that date, the Census Bureau announced.

The ginnings in running bales, counting round as half bales, by States, follow:

Alabama, 992,454; Arizona, 65,251; Arkansas, 877,946; California, 42,445; Florida, 48,646; Georgia, 919,295; Louisiana, 449,439; Mississippi, 1,004,396; Missouri, 104,152; North Carolina, 540,593; Oklahoma, 1,129,162; South Carolina, 654,891; Tennessee, 255,188; Texas, 4,131,705; Virginia, 13,777. All other States 38,181.

The crop reporting board, in a statement commenting on the cotton crop report, said:

"Weather, unfavorable to cotton picking during most of the time since November 1, has prevailed throughout the cotton belt and reports indicate that picked cotton has gone promptly to the gin. There has been less weather damage since November 1 than is commonly expected.

"As has been previously reported, the quality of the lint and seed is not as good as usual in most of the Atlantic States. The lint in these States is reported to be shorter than usual a result of drouth following a cold, wet, late spring. In the Atlantic States north of Florida, September rains damaged many of the bolls and the lint from them is stained. Damage on this account in North Carolina is reported to be greater than that caused by the boll weevil.

"All along the northern border of the cotton belt there were many green bolls on the plants at the time of the first killing frost. In north-east Arkansas many of these are expected to open but in Tennessee and North Carolina only a small proportion will yield any lint.

"In Texas, weather conditions have been unusually good for picking and for maturing the top crop as well as the late planted. Freezing temperatures have not been general in Texas and thus some top crop has had opportunity to mature. Although the season in Texas is Texas is about over and young bolls

are badly infested with weevils, there is still some scattering cotton to be picked in seven of the nine districts."

A report of the latest available information as to foreign cotton production compiled by the foreign service of the Bureau of Agricultural Economics, says:

"The cotton crop of Russia is estimated at 397,000 bales of 478 pounds according to a report of the American Agricultural representative in Berlin. This would be an increase of 76,000 bales, or about 24 per cent over the estimated production of 371,000 bales last year.

"The estimated crop of the Chinese provinces of Hupeh and Hunan is placed at approximately 795,000 bales, or 478 pounds, or an increase of 25 per cent according to a report of Consul Heintzleman. These two provinces contain 25 to 30 per cent of China's cotton growing area.

"The probable 1924 Greek crop is between 9,840 and 11,808 bales of 478 pounds, according to a report of the trade commissioner of Athens, quoting the ministry of agriculture. Last year's crop is given as 13,250 bales.

"Prospects for the area of the new cotton crop in the Sudan are favorable, indicating a 20 per cent increase in acreage, according to incomplete reports received by the international institute of agriculture."

Fall River Dividends Average 6.4 Per Cent

Dividends disbursed by Fall River textile mills in the four quarters of 1924 averaged about 6.4 per cent for the year. This figure compares with an average of about 8.2 per cent for the year 1923. The total amount of funds distributed to stockholders during the year amounted to \$2,820,700, as compared with \$3,530,300 for the year 1923. The 1924 total would have been materially lower had the sum of \$562,500 been deducted which sum represents the distribution of assets of the Tecumseh Mills.

Demand Slows Production.

LaGrange, Ga.—The volume of business taken by the knitting mills of this State during the past four weeks has been disappointing to the manufacturers. Most of these plants have a capacity for staple goods and cannot turn aside for the rushing novelty trade, consequently they have suffered. Some of the officials were heard to mention the warm weather as another barrier besides the price uncertainty.

At Douglasville, Ga., the Douglas Mills, with 170 machines, are only running five days a week; this being an increase over their average run during the past four weeks. Moreland Knitting Mills, Moreland, operated 50 hours. Dalton Hosiery Mills, Dalton, was one among a few others to run full time this week—55 hours. Marietta Mills, Marietta, operated four and one-half days this week. Other plants running on part time schedules noticed this week were: Kennesaw Company, Marietta; Manufacturing Company, Union Point; Grantville Hosiery Mills, Grantville, and one or two others.

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Cotton Shippers

Memphis, Tenn.

G. D. TAYLOR

Mississippi Delta Staples

Home Office

Memphis, Tenn.

Study of Cotton Goods Specialties

(Continued from Page 10)

be done co-operatively for other products of advanced character. The plan seems particularly adaptable to certain non-style products, but the export successes of certain cotton goods converters and of a number of garment manufacturers appear to indicate that it has broader possibilities, or that much of our future export expansion of cotton goods trade must be through domestic manufacturers whose raw materials are cotton goods.

In spite of certain limitations of the Webb-Pomerene Act, legalizing combinations selling for export, it would seem highly desirable that centralized agencies handling textiles for export should take advantage of its provisions. It may also be worth noting in this connection that this country's foreign investments increased enormously during and since the world war, and are destined for a further expansion: Trade will follow the dollar just as certainly as it has followed the pound sterling heretofore, and it is up to those responsible for the merchandising of domestic cotton goods to see that none of the apparently broadening export opportunities are lost.

The Relative Importance of Efficient Selling.

If an expert analysis were made of the causes of the varied degrees of success or failure of cotton mills similarly located and equipped I believe it would be found that those having had the benefit of skilful buying, financing and selling would be shown to have been the most uniformly profitable, and that their degree of success had been very closely proportional to the skill with which the latter functions had been handled. This is no reflection upon the importance of efficient plant equipment, operation and management; in fact, the expressed opinion will be found incorrect if it cannot be demonstrated that there is less variation in the efficiency of mill equipment and management than there is in that of buying, financing and selling. The average of the former is both higher and more uniform than the latter. Therefore, if cotton in character and price is poorly bought there is little that can be done by the mill management to retrieve the blunder and restore the product to a competitive basis with the majority of other mills making similar goods and that own their cotton right. More skilful selling than is enjoyed by the competitive mills may retrieve the blunder wholly or in part. The combination of poor buying and selling cannot be overcome by the most efficiently equipped and managed mill, and places the latter at a hopeless disadvantage in meeting competition of plants that are well bought and merchandised. This sufficiently emphasizes the importance to any cotton manufacturing organization of merchandising, and this is the only one of the functions mentioned that is within the scope of this paper.

While a detailed survey of existing merchandising methods in their relation to producers and users of woven cottons and to the various classes of the latter products is highly desirable as an approach to the study of improved and enlarged distribution of style and non-style goods, it is far beyond the scope of this paper. Furthermore, it would be a task far more difficult than the attempt that has been made to draw conclusions from a mass of incomplete and uncomparable statistics of production, equipment and consumption, for the literature of textile merchandising has no competitor in its absolute barrenness.

My attempt to enrich this literature will be confined to one suggestion for increasing merchandising efficiency that I believe to be of almost equal importance in the marketing of both style and non-style woven cottons. I refer to sales promotion on research work.

Sales research work is not new, but the sales research department is not yet an established factor in cotton goods merchandising. I say sales research is not new, for in my contact of over twenty-five years with the textile markets I have known of several merchants and salesmen who were material research men and whose success could be traced very largely to the exercise of this faculty.

Nosing around among customers or prospective customers, and having the mills try out new ideas in fabric construction or finish was all in a normal day's work of these men, and was not dignified by any high-brow word as "research;" yet the sales research that I am attempting to define, and that has become an important part of the sales promotion work of some few commission houses, represents little more than the systematic direction and development of such effort and its organization as an integral part of the merchandising. Research has thus applied may involve everything from fundamental fiber research to the investigation of processes in other industries that might use cotton goods.

Organization of Research Department.

While in its ultimate and ideal form the sales promotion or research department may need the aid of scientific research in textile fibers and processes and in investigation of uses for which textile fabrics are to be developed, the organization of successful sales effort of this character is not dependent upon such aids. The chief requisite is the addition to the sales staff of men having well-rounded technical and practical knowledge of textile fibers and processes, who are naturally inquisitive and inventive and who also possess the attributes of a successful salesman. Men who can

(Continued on Page 47)

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Cotton Goods

New York.—Trading in the cotton goods markets continued on an improved basis last week. The total volume of business done was very large. Some slowing down was noted in sales of gray goods and print cloths, but the market was generally termed very good. Many buyers, instead of operating on the staple numbers of print cloths and sheetings, turned their attention to filling-in needs on specialties for converting and manufacturing.

Print cloths sold at 1/2 cent off in some small second hand transactions, but as a rule mills and agents held firm for a basis of 9 1/4 cents for 64x60s and 10 1/2 cents for 68x72s. Some business was done on the finer counts for printing and bleaching by converters. Narrow goods hold firm. Sheetings were quieter and it was possible to shade some of the current quotations 1/2 cent on small lots offered from second hands. Drills continue to sell better in the 30-inch widths and in some of the 37-inch widths. Pajama checks sold in a small way. Sateens sold at 13 1/2 cents and 13 3/4 cents for 4.37s.

Inquiry for 140x76s domestic broadcloth was noted but spots were not to be found at 26 1/2 cents, at which price they had sold the day before. Imported makes of the same count were also looked for but without avail. Buyers would have bought imported 128x68s if they could have been found at 25 cents. There was the usual interest in lawns with a few small lots reported sold. Some spot 80x56 spot tussahs were reported sold at 23 cents, while contracts were not to be found for less than 23 1/2 cents. The fine goods market was rather quieter than on any recent day, but there were efforts made to pick up some specialties on the price basis that obtained some time ago.

Many of the finished lines showed considerable improvement. Narrow prints have sold to capacity. Percales sold well. Bleached goods orders have placed mills comfortably under order for some weeks ahead. Unbranded lines of 4-4 goods have been well sold ahead by bleachers and converters. Wide sheets, sheets and pillow cases moved in a moderately large way. Mixtures in wash goods sold well to the retailers. Some buyers are showing interest in napped goods for another season.

Business in certain of the fine yarn cloths has been better. There are reports of some business in plain silk and cotton crepes, with prices stronger. For 80x76 single end, 25 is quoted; 28 for 80x76 two-end; 35 for a good make of 80x96

two-end. There has been some business in artificial silk filled crepes. Some of the artificial silk fancies have also been reported selling. New broadcloth business has been irregular, some reporting good volume continuing on certain styles, with other centers finding additional trading on these goods, quiet.

Eastern mill prices on plain silk and cottons are firm. For 96x100 single end, 23 and higher is quoted. Some 35-inch, 96x100, two-end, 14/16 Cantons, sold spots, at 29 1/2. Bids of 17 1/4 for 96x64 Cantons earlier in the week has been declined with one-half considered the best and several holding for 18 cents. One mill quoted 19 cents. Eastern mills were firm for 23 on 80x56 Tussahs and some quote higher.

Domestic broadcloths, 128x68, all-combed and several styles within range of that number have been the feature of some of the recent trading. Sizable sales of these numbers were put through last week, including business that will run into June delivery. There were further good sales recorded, for delivery beginning around the first of the year. Under 22 1/2 cents was reported paid for certain goods. The price of 22 1/2 cents seems to be the general open quotation for good grades of 128x68; special trades, involving sizable quantities, are understood to have been consummated at lower than this. Early in the week there had been reports of 22 cents paid for certain styles. Spot lots of 144x76 singles, domestic, were sold at 26 1/2 cents, with fair inquiry reported for quick deliveries. Spots of 112x60 all-combed were reported at 20 1/2 cents; 19 1/4 was the last heard on contract, all-combed; 16 cents continues to be heard for Southern carded.

Sales in the Fall River print cloth market fell off somewhat from the high record made the previous week. Buyers were evidently unwilling to meet the higher prices asked by mills, but the latter continued very firm in their price ideas. As a result, the amount of business done was not large.

Cotton goods prices in primary hands were quoted as follows:

Print cloths, 28-in., 64x64s	7%
Gray goods, 38 1/2-in., 64x64s	9%
Gray goods, 39-in., 68x72s	10 1/2%
Gray goods, 39-in., 80x80s	13%
Brown sheetings, 3-yard	14 1/2%
Brown sheetings, 4-yard	11%
Brown sheetings, stand.	15 1/2%
Tickings, 8-ounce	26
Denims	19 1/2%
Staple gingham, 27-in.	10 1/2%
Dress gingham	17 1/2a20

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Extra staples, and good 1 1-16 and 1 1/2 cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.

The Yarn Market

Philadelphia, Pa.—The week in the yarn market brought out a broadening demand from all sections of the yarn using industry. Prices held very firm. Trading for future business reached a volume that was very encouraging and which showed a substantial gain over contract business done during the past several weeks. The bulk of the business, however, continued to be made up of orders for spot and nearby delivery. Buyers, however, showed much more interest in future requirements and indications point to a much better forward business in the next several weeks. The price trend is toward a gradual upward movement, but high quotations are not being pushed too rapidly. They are developing with a firmness that is regarded as being much better than a quick upward move.

Buyers became more cautious at mid-week, many of them being inclined to await the Government report on Friday.

The broadening inquiry noted during the week covered 1925 requirements from many yarn consumers who are apparently ready to buy. It covered both carded and combed yarns and the quantities and deliveries inquired for were very encouraging. Yarn factors in this market seem convinced that if prices are not carried up too rapidly, a very large amount of contract business will develop between now and the first of the year. The position of the spinners has been materially strengthened during the past three weeks and the market has every indication of developing a situation that will allow spinners a reasonable and safe margin above manufacturing costs.

Prices in this market were quoted as follows:

Two-Ply Chain Warps.			
2-ply 6s	42 a	2-ply 26s	50 a51
10s	43 a	2-ply 30s	52 a52½
2-ply 46s	45 a	2-ply 40s	58 a59
2-ply 20s	46 a	2-ply 50s	65 a66
2-ply 24s	48 a49		
Two-Ply Skeins.			
8s	40 a	40s	56 a57
10s to 12s	41 a42	40s ex.	59 a60
14s	43 a	50s	65 a
16s	44 a45	60s	74 a
20s	45 a46	Tinged Carpet	
24s	48 a	3 and 4-ply 38	a39
26s	49 a	White Carpet	
30s	51 a	3 and 4-ply 40	a41
36s	54 a		
Part Waste Insulated Yarn.			
6s, 1-ply 35	a35½	12s, 2-ply 39	a40
8s, 2, 3 and 4-ply	37 a	20s, 2-ply 44½	a45
10s, 1-ply and 2-ply	38 a	26s, 2-ply 49	a
		36s, 2-ply 50	a
Duck Yarns.			
3, 4 and 5-ply		3, 4 and 5-ply	
8s	40 a41	16s	44 a45
10s	41 a42	20s	45 a46
12s	42 a43		
Single Chain Warps.			
10s	42 a	24s	48 a
12s	42½ a	26s	49 a
14s	43 a	30s	51 a52
16s	44 a	40s	57 a58
20s	45 a		

Southern Single Skeins.

6s to 8s	40 a	20s	44½ a45
10s	41 a	24s	46½ a
12s	42 a	26s	48 a
14s	42½ a	20s	51 a
16s	43½ a44		

Frame Cones.

8s	40 a	22s	44 a44½
10s	41 a	24s	45½ a46
12s	41½ a	26s	46 a47
14s	42 a	28s	48 a
16s	42½ a	30s	50 a
18s	48 a	30s tying in	48½ a49
20s	44 a	40s	55 a57

Bulletin of Yarn Spinners' Association.

The bulletin of the Southern Yarn Spinners' Association says:

"Yarn prices have shown a slight advance during the past week. The general tone of the yarn market is firm, with a good demand. Spinners' asking prices are slightly above the prevailing quotations, and are firmly maintained. Nearby deliveries are increasingly hard to secure. Spot deliveries are practically impossible. Spinners are hesitant to take business for delivery after January 1, although in some instances buyers are anxious to place business in volume for the early winter.

"Eastern trade papers in commenting on the situation call attention to the strength of the spinner's position, due to their conservative curtailment during depressed business conditions, and proper distribution of their product, and prophecy that with continued conservatism that they will experience a most profitable year.

"To sum up the situation, prices are firm and demand good. Production is being kept well within demand, and stocks have been reduced to the vanishing point. On the whole the situation points to a prosperous season."

Pacific Mills Wide Sheeting Product To Be Offered Soon.

The initial offering of the new wide sheeting product of Pacific Mills will take place soon. Plans for the merchandising of the goods were discussed at a luncheon-meeting of officials of the Pacific Mills, members of the firm of Lawrence & Co., executives and salesmen of the bleached goods department, at the Merchants Club, New York. Among those present were Edwin Farnham Greene, A. E. Cilby, assistant treasurer of the Pacific Mills; Agent Southworth, and L. S. Little, superintendent of the new Pacific Mill and Bleachery, at Lyman, S. C., where the wide sheetings will be produced.

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Wanted — Position as superintendent. Now employed. On present job five years. Address "Q. R.," care Southern Textile Bulletin.

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Master mechanic for 20,000 spindle yarn mill, electric drive. Prefer a man from Georgia or Alabama. Not interested in one who uses intoxicating liquors. Replies treated confidential. Address A. O., care Southern Textile Bulletin.

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159 Aborn Street, PROVIDENCE, R. I.

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P. O. Box 792 **GREENVILLE, S. C.**

U. S. Ring Travelers are uniformly tempered which insures even-running spinning. They are also correct as to weight and circles. Quality guaranteed.

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(Virgin Wool)

Edward H. Best & Company

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10,000 SPINNING SPINDLES

D — 8 LATEST MODEL

$\frac{3}{8}$ " WHIRL
STANDARD McMULLAN BLADE
VARYING 2 TO 4 YEARS OLD.
IN FINE CONDITION
REPLACED BY TAPE DRIVE SPINDLES

Large Supply Filling Bobbins
For Automatic Looms to Fit These Spindles

**SAMPLES SUBMITTED
PROMPT DELIVERY
ATTRACTIVE PRICE**

SACO-LOWELL SHOPS
CHARLOTTE, N. C.

EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is \$2.00, which will also cover the cost of carrying a small advertisement for one month.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only \$1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT POSITION as roll coverer. Have had 20 years' experience and can give excellent references. No. 4324.

WANT POSITION as overseer spinning. Overseer for 20 years on all counts and colors, both carded and combed, from various stocks. Can get results. Would consider \$33 weekly, with free rent. No. 4327.

WANT POSITION as superintendent. My experience covers mills in both North and South on a wide variety of goods and yarns. Excellent references to show past record of unusual achievement. No. 4328.

WANT POSITION as superintendent of cotton yarn or good mill. Man of unusual ability and can give references to show excellent past record. No. 4329.

WANT POSITION as overseer spinning or night superintendent. Qualified by experience and training to handle room on efficient basis. A-1 references. No. 4330.

WANT POSITION as overseer weaving. My experience covers wide variety of fancy goods, including silk mixture. First-class references as to character and ability. No. 4331.

WANT POSITION as overseer carding or spinning, or would take good second hand's place. North Carolina preferred. Long experience. I. C. S. graduate, age 30, married, sober. References. No. 4332.

WANT POSITION as superintendent or overseer weaving. Practical, experienced man on many different fabrics. Long and satisfactory record as overseer and superintendent. Best of references. No. 4333.

WANT POSITION as overseer cloth room. Now employed, but wish larger place. Long experience. Best of references. No. 4334.

WANT POSITION as superintendent or assistant superintendent in good mill on white work. Man of good habits, unusual ability and have long record of satisfactory services. No. 4335.

WANT POSITION as superintendent, prefer yarn mill. Now employed but can change on short notice. Best of references. No. 4336.

WANT POSITION as superintendent, or overseer carding, spinning and twisting. Experienced man with excellent past record. Good references. No. 4337.

WANT POSITION as overseer carding or spinning, or both. Now employed, but want larger place. First-class references to show character and ability. No. 4338.

WANT POSITION as overseer weaving or assistant superintendent. Have had 19 years as overseer on all grades of yarn and cloth. Excellent references. No. 4340.

WANT POSITION as overseer carding or spinning or superintendent of yarn mill. Now employed but can change on short notice. Can get quality production at low cost. Best of references. No. 4341.

WANT POSITION as overseer carding, 20 years as overseer on all classes of work. Now employed. Age 40, married, have family. Good references. No. 4342.

WANT POSITION as overseer weaving. Experienced on wide variety of fabrics, both plain and fancy. Have excellent record and can give first-class references as to character and ability. No. 4343.

WANT POSITION as superintendent or overseer carding or spinning room. Familiar with fine and coarse numbers and know how to get satisfactory results. Good references. No. 4344.

Study of Cotton Goods Specialties

(Continued from Page 43)

meet this specification 100 per cent are rare; so are great merchants. There is no lack of men in our mills, however, who are capable of making a commercial delivery on every item of the specification, and the success of some who have gone out of the mills into the selling game demonstrate the conservatism of this estimate. How much greater might be their success if they had full opportunity to capitalize their practical knowledge it is difficult to say. There are mill agents and superintendents whose natural merchandising ability is languishing in their present activities, and there are members of selling organizations who would make ideal mill executives.

The usual makeshift of the sales organization that is not sold on the sales promotion or research idea is to make use of their mill man or designer (if they have either) when an emergency arises and let him investigate and attempt to solve the particular problem that has arisen; or the agent or superintendent of the mill that might be benefited by the prospective sale is given the temporary job. The merchant would not think of delegating one of his sales force to run one of his mills temporarily, yet because the mill man falls down on a selling job the merchant dismisses selling research as impracticable. When the increasing demand from prospective buyers for such service is brought to his attention he is likely to reply that the buyer looking for a fabric to meet a new requirement will wind up by taking the staple construction that approximates to his needs. In this he is quite right, as many buyers prefer to purchase lines that are highly competitive, rather than special constructions. That was why the tire trade started on square woven duck made of 23s combed Sea Island or Egyptian yarns; and see how far they now are from the original specifications! I hold that if the right kind of practical mill man and tire man had got together originally and subjected the cloth or cord requirements of the latter to a thorough investigation and scientific research the present state of the art would have been attained years ago. It has taken artificial leather manufacturers almost as long to obtain the right fabrics for coating and I believe that there still exists here a fair field for the research salesman.

Edw. W. Geer J. Hoyt Geer

Geer & Geer

Cotton

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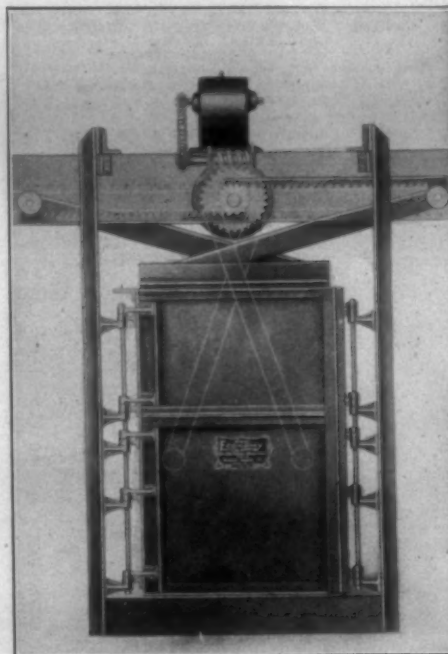
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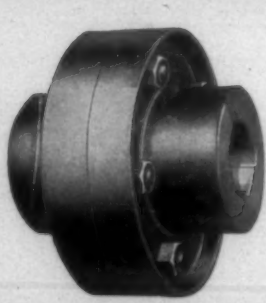
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